OKI MICROLINE ML380

TROUBLESHOOTING MANUAL WITH COMPONENT PARTS LIST

PREFACE

This manual describes detailed troubleshooting of the component parts comprising the Microline 380 and provides a replacement component parts list.

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TROUBLESHOOTING MANUAL

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1. OUTLINE

This troubleshooting flowchart is designed for the repair of the PC board assemblies. Those attempting to repair these assemblies are assumed to have basic ability and experience in troubleshooting.

2. TOOLS

In addition to the general maintenance tools, the following tools are required.

- Oscilloscope : About 100 MHz
- Soldering iron : Any soldering iron available on the market (preferably with a pointed tip.)

3. TROUBLESHOOTING TABLES

When a fault occurs, see the following table to find its cause and then proceed with the flowcharts in Item 4.

Conditions	Sympton	Flowchart No.
At power-on	No operation (The power lamp remains off.)	1
	No operation of space motor (The select lamp blinks.)	2
	Abnormal operation of space motor (The space motor vibrates or cannot be controlled.)	3
During printing or while receiving data	Printing error or missing dots.	4
	No line feed.	5
	Switches on operator panel do not work.	6

Faulty PC boards	Description	Flowchart No.
Control board	Flowchart for repairing CPU circuit.	7
	Flowchart for repairing PGROM and CGROM.	8
	Flowchart for repairing EPROM .	9
	Flowchart for repairing external RAM.	10
	Flowchart for repairing serial I/F.	11
	Flowchart for repairing head thermistor.	12
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4. TROUBLESHOOTING FLOWCHART

(1) No Operation (The power lamp remains off.)

- Is fuse (F1) on filter board of power unit blown?

Yes / No

- Are 8 V and 35 V normal? (See Figure 4-1.)

No / Yes

- Go to **(7)**.

- Is power line at filter board side short-circuited?

No / Yes

- Replace the power unit.

- Is power line at control board side short-circuited?

No / Yes

- Check power line in control board.

- Is connector connected normally?

Yes / No

- Connect connector normally.

- Is power supplied normally again?

Yes / No

- Replace power unit.

- Is power supplied normally for a while?

No / Yes

- End

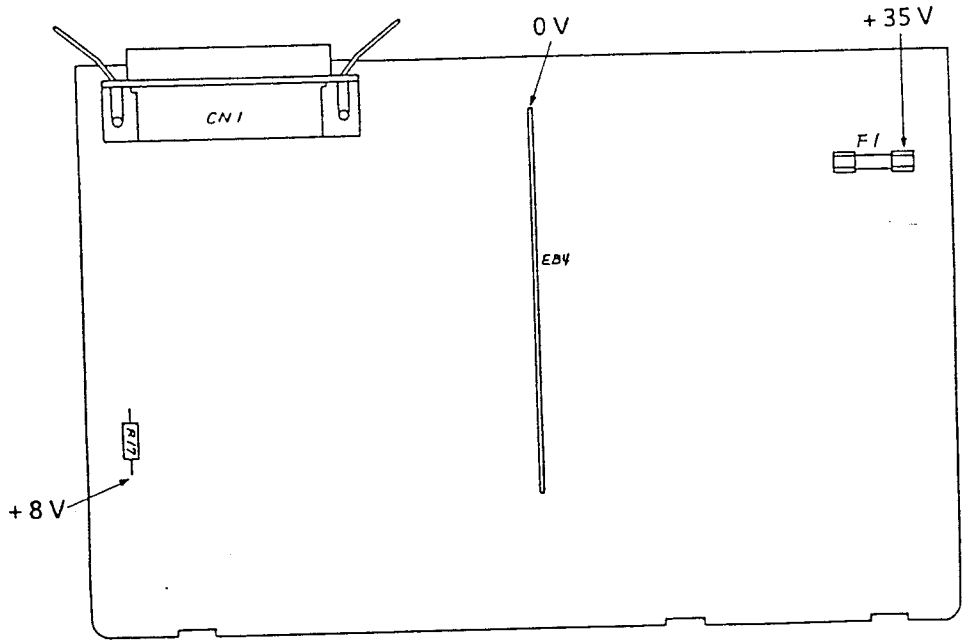
- Replace the control board.

- Is power turned on normally and does it remain on for a while?

No / Yes

- Replace the power unit.

- Go to **(15)** to repairing alarm circuit.



+ 8 V: 7.5-12.5 V
+ 35 V: 36-44 V
at power-on

Figure 4-1

(2) No Operation of Space Motor (The select lamp blinks, but the font lamp and pitch lamp are on.)

Check the lamp status to find the error cause and take the proper action in accordance with the following table.

Lamp lighting						Description	Repair method or troubleshooting flowchart No.
FONT			PITCH				
PRES-TIGE	COU-RIER	RO-MAN	20	10	15	ODA	
ORA-TOR	COU-RIER	HEL-VETTE	20	10	15	ODG	
	○			○		Master CPU check error (Q5) Internal RAM error	Replace Q5.
	○		○			Serial I/F error	Refer to (11).
○				○		Program ROM error (Q2)	Refer to (8).
○			○			EEPROM error (Q18)	Refer to (9).
○					○	Resident CG ROM error (Q3)	Refer to (8).
○			○		○	Cartridge CG ROM error	Refer to (13).
		○		○		External RAM error	Refer to (10).
		○	○		○	Cartridge External RAM error (Q4)	Refer to (13).
○	○			○		Head homing error	Refer to (14).
○	○		○			Spacing error	Refer to (14).
○	○				○	Thermistor open error	Refer to (12).
	○	○		○	○	Master CPU check error (Q5)	Refer to (7).
	○	○		○			
	○	○	○				
	○	○			○		
	○	○	○	○			
○		○		○			
○		○	○		○		

(3) Abnormal Operation of Space Motor (The space motor vibrates and cannot be controlled.)

- Does carriage move manually right and left smoothly with power turned off?

No Yes

- Does carriage move normally after completing flowchart (14)?

Yes No

- Replace space motor assembly.

- End

- Is dust or foreign objects around carriage area?

No Yes

- Remove dust or foreign objects.

- Is space rack broken?

No Yes

- Replace space rack.

  Note : Be sure to adjust head gap after the part is replaced.

- Is idle pulley broken?

No Yes

- Replace idle pulley.

- Does carriage move smoothly after space motor assembly is removed?

Yes No

- Replace carriage frame or carriage shaft.

- Replace space motor assembly.

Note : Be sure to adjust head gap after the part is replaced.

(4) Printing Error or Missing Dots

- Are the parts listed below connected normally?
  (Control board, head cable, print head, interface cable)

Yes ↓ / No → • Connect above parts correctly.

- Does printer print normally after print head is replaced?

No ↓ / Yes → • End

- Is ribbon protector deformed or is its position shifted?

No ↓ / Yes → • Replace ribbon protector, or install it correctly.

- Does printer print correctly after control board is replaced?

No ↓ / Yes → • Go to (16) to repairing the head drive circuit.

- Are head cable or interface cable broken or disconnected?

Yes ↓ / No → • Adjust head gap.

- Replace the defective part.

Note : *Be sure to adjust head gap after part is replaced.*

(5) No Line Feed

- Is LF motor assembly connected correctly?

Yes No

- Connect LF motor assembly correctly.

Is paper feed normally?

No Yes

- End

- Replace LF motor assembly.

- Go to (17) to repairing the line feed circuit.

(6) Switches on Operation Panel Do Not Work

- Are the output levels of the following pins for ports of switch (Q7LSI) above 3.5 (V)? Pin 54 (OPSW1-N), pin 55 (OPSW2-N), pin 56 (OPSW3-N), pin 70 (OPSW4-N), pin 69 (OPSW5-N)

Yes No

- Replace Q7.

- When the switch is pressed, is output level of the corresponding pin below 1.5 (V)?

Yes No

- If pin 54 (OPSW1-N) is defective, replace SW1 (SELECT).
- If pin 55 (OPSW2-N) is defective, replace SW2 (FEED).
- If pin 56 (OPSW3-N) is defective, replace SW3 (TOF/PARK).
- If pin 70 (OPSW4-N) is defective, replace SW4 (FONT).
- If pin 69 (OPSW5-N) is defective, replace SW5 (PITCH).

- Check whether ROM and other parts are functioning correctly.

(7) Flowchart for Repairing Defective CPU Circuit (No Operation)

- Does OSC oscillate? (Figure 4-2)

Yes — No

- Replace OSC or Q5.

- Is reset signal normal? (Figure 4-3)

Yes — No

- Replace Q8.

- Is output level of each port of Q5 normal? (Figure 4-4)

Yes — No

- Replace Q5.

- Is output level Q7 normal? (Figure 4-5)

Yes — No

- Replace Q7 or its related devices

- Go to (18).

- OSC oscillating time chart (pins 14 and 15 of Q5)

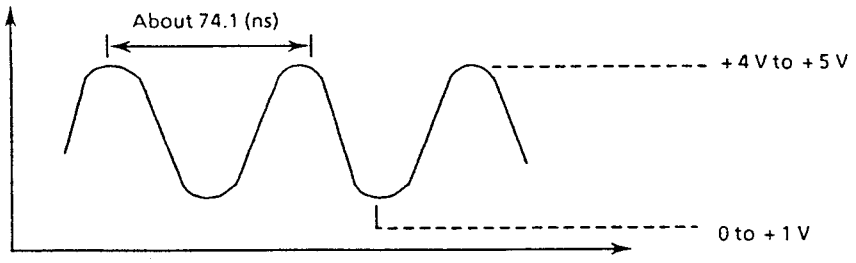
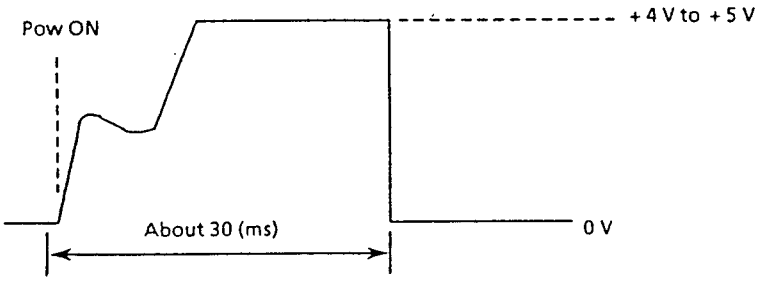


Figure 4-2

- Reset signal waveform (pin 1 Q8)



The waveform shown above is normal.

Figure 4-3

- Output level of Q5 port

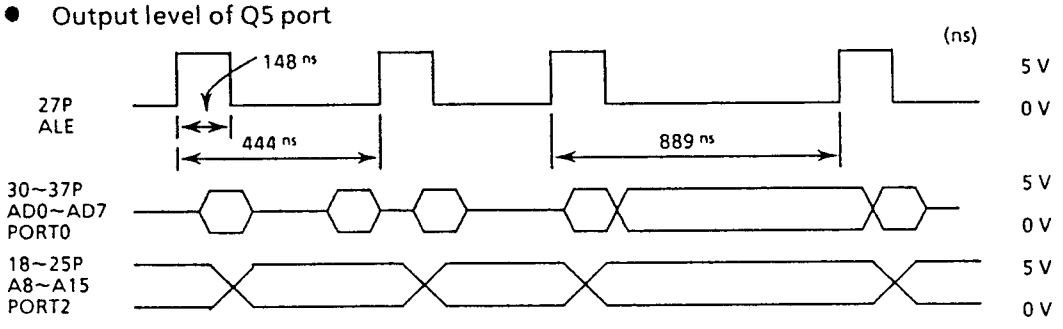


Figure 4-4

- Q7 output level

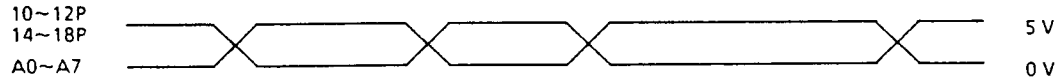


Figure 4-5

(8) Flowchart for Repairing PGROM and CGROM

- Is the correct ROM installed?

Yes No

- Replace ROM.

- Is shorting plug setting for ROM select correct?

Yes No

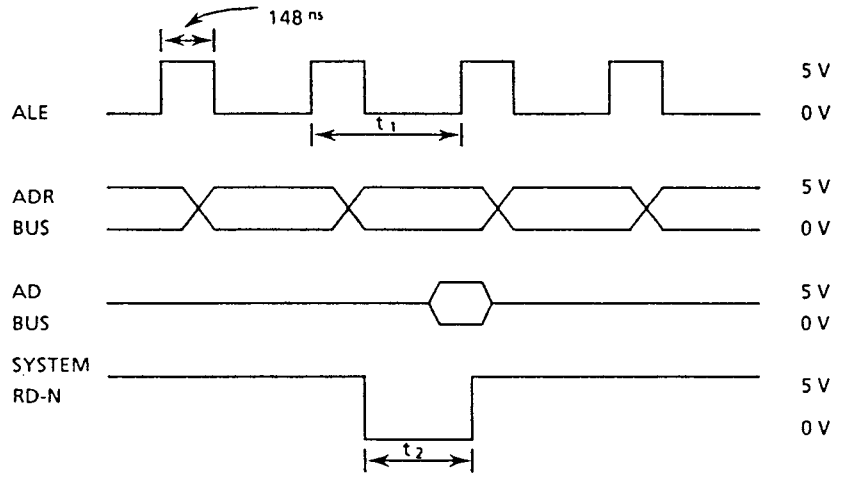
- Set shorting plug correctly.

- Are output levels of ADDRESS BUS and AD BUS normal? (Figure 4-6)

Yes No

- Replace ROM or LSI on the BUS LINE.

- Replace PGROM or CGROM.



t_1	PG ROM	444 (ns)	When PG ROM is accessed.
	CG ROM	889 (ns)	When CG ROM is accessed.
t_2	PG ROM	222 (ns)	When PG ROM is accessed.
	CG ROM	445 (ns)	When CG ROM is accessed.

Figure 4-6

(9) Flowchart for Repairing EEPROM

- Are levels of CLK, CS, DI, and DO signals normal? (Figure 4-2)

Yes No

- Replace Q5.

- Replace Q18.

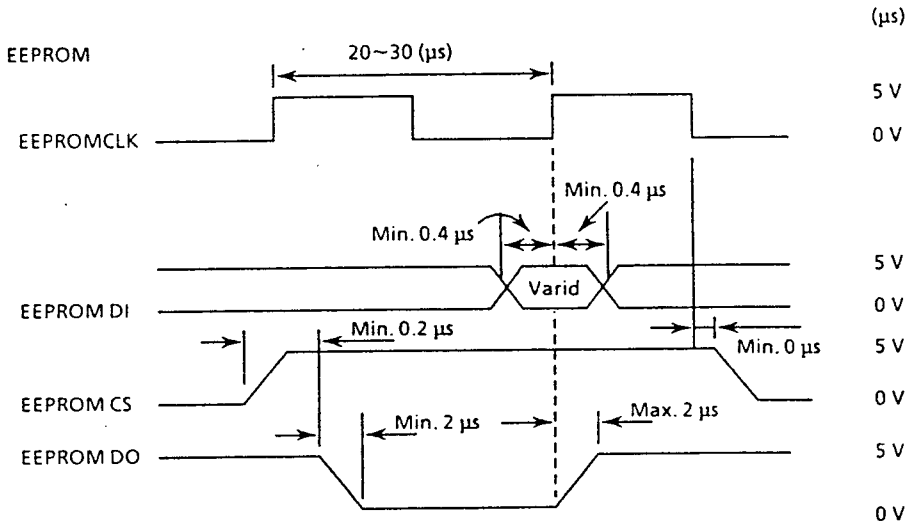


Figure 4-7

(10) Flowchart for Repairing External RAM

- Are output levels of ADDRESS BUS and AD BUS normal? (Figure 4-8)

Yes No

- Replace the device such as LSI on BUS LINE.

- Replace RAM.

External RAM, Cartridge CG ROM or Cartridge External RAM.

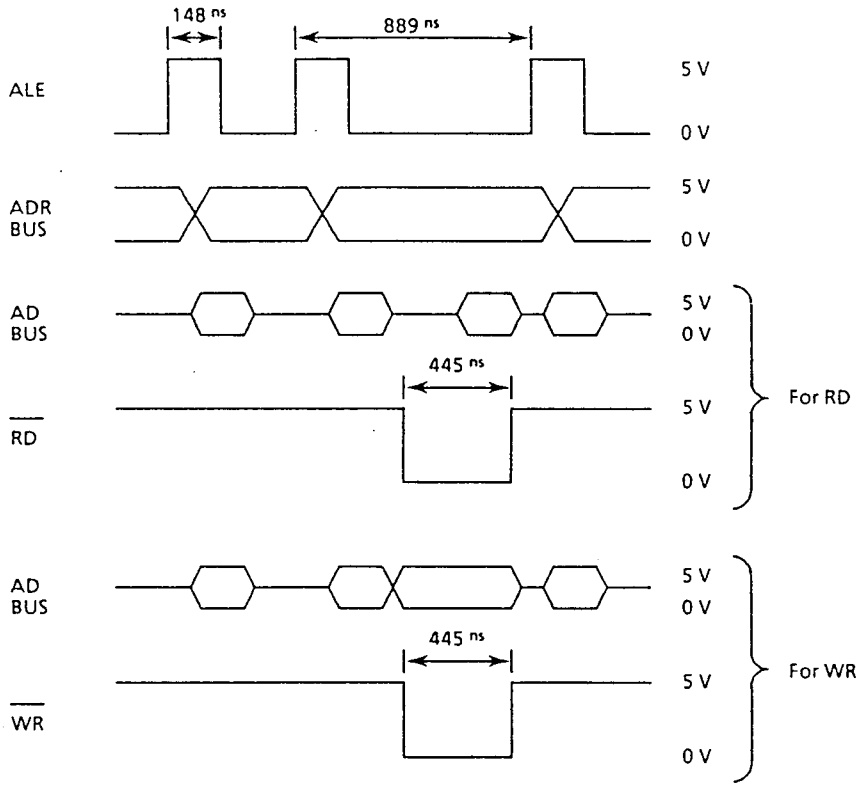


Figure 4-8

(11) Flowchart for Repairing Serial Interface Module

- Is serial interface module connected to connector (CN1) correctly?

Yes No

- Connect serial interface module correctly.

- Replace serial interface module.
- Does the serial interface module operate normally?

No Yes

- Does OSC oscillate?

Yes No

- Replace OSC or Q1.

- Is correct ROM installed?

Yes No

- Replace ROM.

- Is output level of ADDRESS BUS and AD BUS normal? (Figure 4-9)

Yes No

- Replace ROM or LSI on the BUS line.

- Go to (19).

- Is DATA BIT1~3 output level of interface signal normal? (Figure 4-10)

Yes No

- Replace Q7.

- Replace control board.

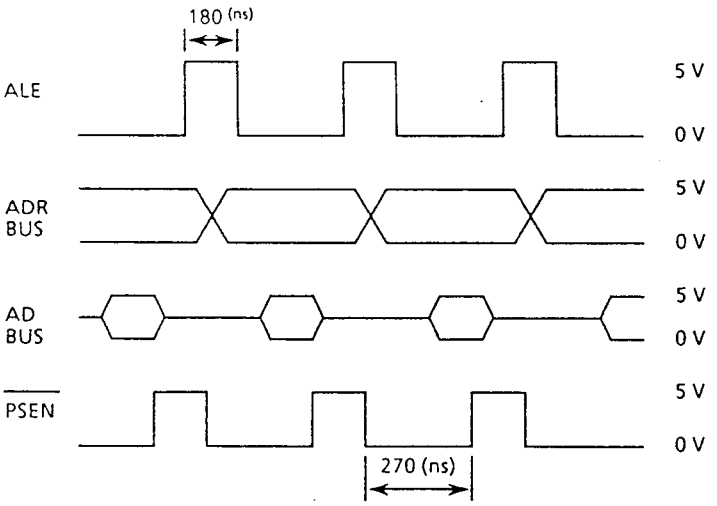


Figure 4-9

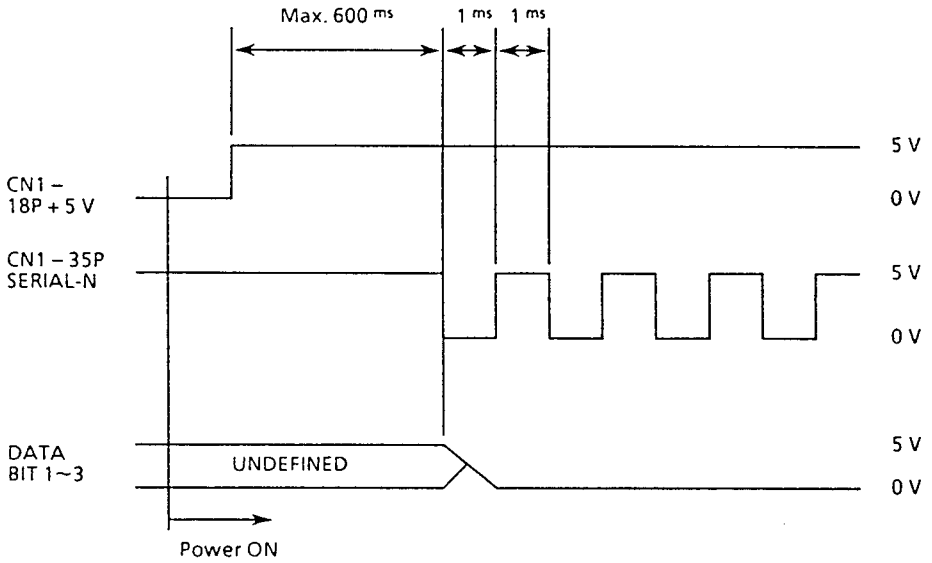


Figure 4-10

(12) Flowchart for Repairing Head and Thermistor

- Is head cable connected to connector CN6 or CN7 correctly?

Yes No

↓ • Connect head cable correctly.

- Replace print head.
- Does printer operate normally?

No Yes

↓ • End

- Replace head cable.
- Does the printer operate normally?

No Yes

↓ • End

- Are output levels of pin 13 Q8 low (0 V)?

Yes No

↓ • Replace Q8 (NJM2901N).

- Replace Q5.

(13) Flowchart for Repairing Cartridge CG ROM and Cartridge External RAM

- Is cartridge connected to CN5 correctly?

Yes No

↓ • Connect cartridge correctly.

- Replace cartridge.
- Does printer operate normally?

No Yes

↓ • End

- Are output levels of ADDRESS BUS and AD BUS normal? (Figure 4-8)

Yes No

↓ • Replace Q20, LSI, or CPU on the BUS LINE.

- Replace control board.

(14) Flowchart for Repairing Space Circuit

- Is fuse (F1) blown?

No Yes

- Replace F1 fuse.

- Is CN8 connected correctly?

Yes No

- Connect CN8 correctly.

- Are all output levels of ports for Q7LSI normal? (If no output port level changes, Q7 is regarded as defective.) (Figure 4-11)

  SMU1 (Q7 pin 78), SMU2 (Q7 pin 77), SMU3 (Q7 pin 79), SMU4 (Q7 pin 80), SML1 (Q7 pin 2), SML2 (Q7 pin 1), SML3 (Q7 pin 3), SML4 (Q7 pin 4)

Yes No

- Replace Q7.

- Are all signal levels of space motor in the following phases normal? (If no output is changed compared with phase signals, Tr, Q16 or Q17 are regarded as defective.)

  SPØ1 (Q16), SPØ2 (Q17), SPØ3 (Q16), SPØ4 (Q17), SPOVDVØ 1 (Tr 104 or Q16), SPOVDVØ 2 (Tr105 or Q17), SPOVDVØ 3 (Tr106 or Q16), SPOVDVØ 4 (Tr107 or Q17)

Yes No

- When SP Ø1 (Q16) is defective, replace Q16.
- When SP Ø2 (Q17) is defective, replace Q17.
- When SP Ø3 (Q16) is defective, replace Q16.
- When SP Ø4 (Q17) is defective, replace Q17.
- When SPOVDV Ø1 (Tr104 or Q16) is defective, replace Tr104 or Q16.
- When SPOVDCVØ2 (Tr105 or Q17) is defective, replace Tr105 or Q17.
- When SPOVDV Ø3 (Tr106 or Q16) is defective, replace Tr106 or Q16.
- When SPOVDV Ø4 (Tr107 or Q17) is defective, replace Tr107 or Q17.

- Replace space motor assembly.

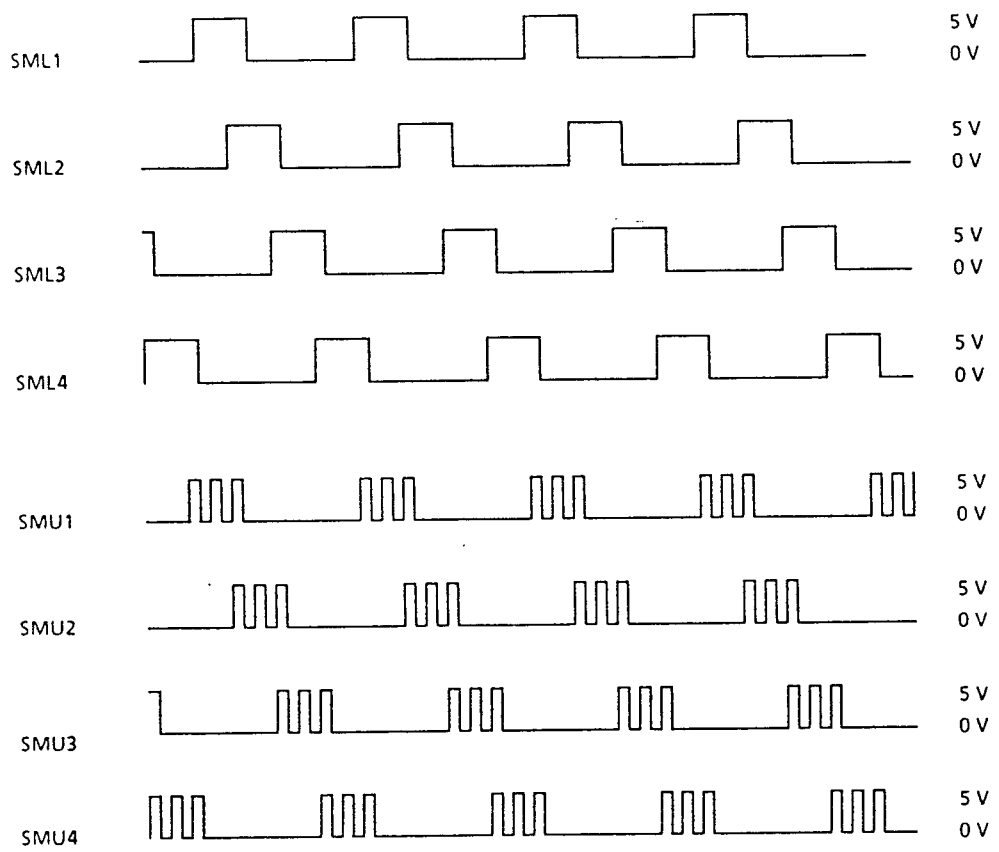


Figure 4-11

(15) FLowchart for Repairing Alarm Circuit

- Check drive transistors in drive alarm circuits.

  Check output level of transistor. If + 35 V is output always, the transistor is regarded as defective.

- Are input and output levels of HEADALM (Tr10) normal?

Yes No

- Replace Tr10.

- Are input and output levels of LF ALM1 (Tr6) normal?

Yes No

- Replace Tr6.

- Are input and output levels of LF ALM2 (Tr5) normal?

Yes No

- Replace Tr5.

- Is output level of pin 2 Q8 and input level of pins 4 and 5 Q8 normal? (Figure 4-12)

Yes No

- Replace Q8.

- Is output level of Tr108 about 8 (V)?

No Yes

- Replace Tr108.

- End

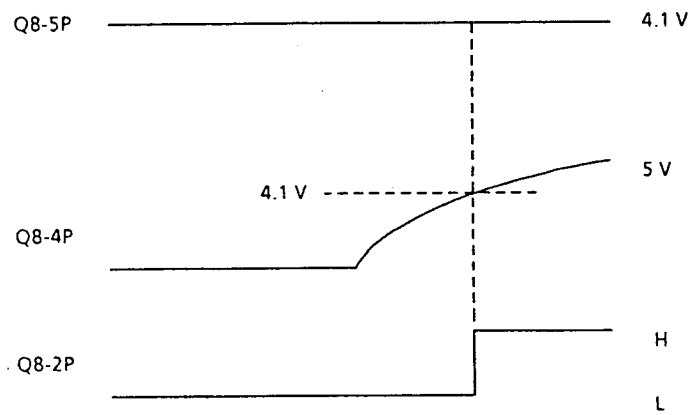


Figure 4-12

(16) Flowchart for Repairing Head Drive Circuit

- Are all levels of output ports for LSI normal? (Figures 4-13 and 4-14)
  (If output port level does not change, Q6 is regarded as defective.)

  HEAD ON-N(Q6 pin 64), HEAD OFF1-N (Q6 pin 63), HEAD OFF2 (Q6 pin 77)

Yes No

- Replace Q6.

- Are input and output levels of EN (Tr103) normal?

Yes No

- Replace Tr103.

- Are input and output levels of HEAD COMMON (Tr10) normal?

Yes No

- Replace Tr10.

- Go to ⑯-1.

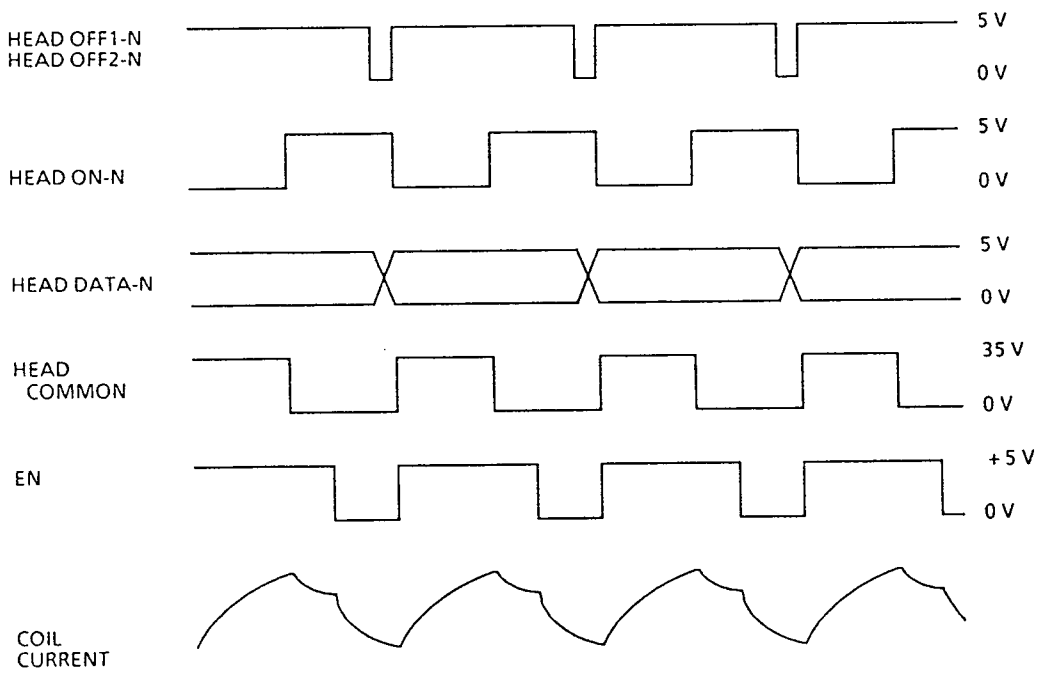


Figure 4-13

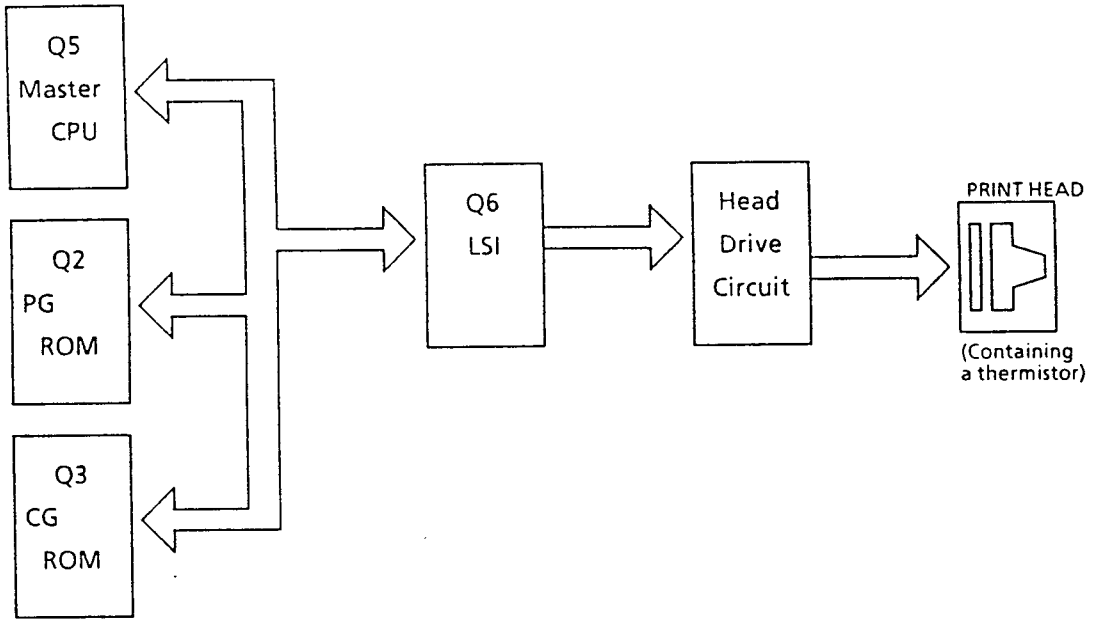


Figure 4-14 Head Drive Block Diagram

⑯-1

- Check each pin to find pin No. causing printing error or missing dots.
- Is HEAD1 (Q9) signal normal for pin 1?

  Yes → ● Replace Q6.

  No → ● Replace Q9.

- Is HEAD2 (Q11) signal normal for pin 2?

  Yes → ● Replace Q6.

  No → ● Replace Q11.

- Is HEAD3 (Q10) signal normal for pin 3?

  Yes → ● Replace Q6.

  No → ● Replace Q10.

- Is HEAD4 (Q11) signal normal for pin 4?

  Yes → • Replace Q6.

  No → • Replace Q11.

- Is HEAD5 (Q12) signal normal for pin 5?

  Yes → • Replace Q6.

  No → • Replace Q12.

- Is HEAD6 (Q14) signal normal for pin 6?

  Yes → • Replace Q6.

  No → • Replace Q14.

- Is HEAD7 (Q9) signal normal for pin 7?

  Yes → • Replace Q6.

  No → • Replace Q9.

- Is HEAD8 (Q13) signal normal for pin 8?

  Yes → • Replace Q6.

  No → • Replace Q13.

- Is HEAD9 (Q11) signal normal for pin 9?

  Yes → • Replace Q6.

  No → • Replace Q11.

- Is HEAD10 (Q13) signal normal for pin 10?

  Yes → • Replace Q6.

  No → • Replace Q13.

- Is HEAD11 (Q11) signal normal for pin 11?

  Yes → • Replace Q6.

  No → • Replace Q11.

- Is HEAD12 (Q13) signal normal for pin 12?

  Yes → • Replace Q6.

  No → • Replace Q13.

- Is HEAD13 (Q9) signal normal for pin 13?

  Yes → • Replace Q6.

  No → • Replace Q9.

- Is HEAD14 (Q14) signal normal for pin 14?

  Yes → • Replace Q6.

  No → • Replace Q14.

- Is HEAD15 (Q10) signal normal for pin 15?

  Yes → • Replace Q6.

  No → • Replace Q10.

- Is HEAD16 (Q14) signal normal for pin 16?

  Yes → • Replace Q6.

  No → • Replace Q14.

- Is HEAD17 (Q10) signal normal for pin 17?

  Yes → • Replace Q6.

  No → • Replace Q10.

- Is HEAD18 (Q12) signal normal for pin 18?

  Yes → • Replace Q6.

  No → • Replace Q12.

- Is HEAD19 (Q9) signal normal for pin 19?

  Yes → • Replace Q6.

  No → • Replace Q9.

- Is HEAD20 (Q12) signal normal for pin 20?

  Yes → • Replace Q6.

  No → • Replace Q12.

- Is HEAD21 (Q13) signal normal for pin 21?

  Yes → • Replace Q6.

  No → • Replace Q13.

- Is HEAD22 (Q12) signal normal for pin 22?

  Yes → • Replace Q6.

  No → • Replace Q12.

- Is HEAD23 (Q10) signal normal for pin 23?

  Yes → • Replace Q6.

  No → • Replace Q10.

- Is HEAD24 (Q14) signal normal for pin 24?

  Yes → • Replace Q6.

  No → • Replace Q14.

Note : *If some characters are printed incorrectly or their dots are missing, interface circuit on the control board or interface cable is suspected to be defective.*

If horizontal dots are missing, the head cable is connected incorrectly or the head is suspected to be defective.

(17) Flowchart for Repairing LINE FEED Circuit

- Are all output levels of ports below for Q7 (LSI) normal?
  (When no level of LSI changes, Q7 is regarded as defective.)

  LFOVDV (Pin 40 Q7), LF Ø1 (Pin 34 Q7), LF Ø2 (Pin 36 Q7), LFØ3 (Pin 35 Q7), LF Ø4 (Pin 37 Q7)

Yes No

- Replace Q7.

- Are all signal levels in phases of LF motor normal?
  (When no output level changes, it is regarded as defective.)

Yes No

- If LFMO Ø1 (Tr1) is defective, replace Tr1.
- If LFMO Ø2 (Tr4) is defective, replace Tr4.
- If LFMO Ø3 (Tr2) is defective, replace Tr2.
- If LFMO Ø4 (Tr3) is defective, replace Tr3.
- If LFOVDV (Tr9) is defective, replace Tr9.
- If LFCOM Ø24 (Tr6) is defective, replace Tr6.
- If LFCOM Ø13 (Tr5) is defective, replace Tr5.

- End

Line Feed

- While + 8 V is being applied to the LF motor, it remains stopped.
- When + 35 V is applied by the LFOVDV signal, the LF motor starts feed operation.

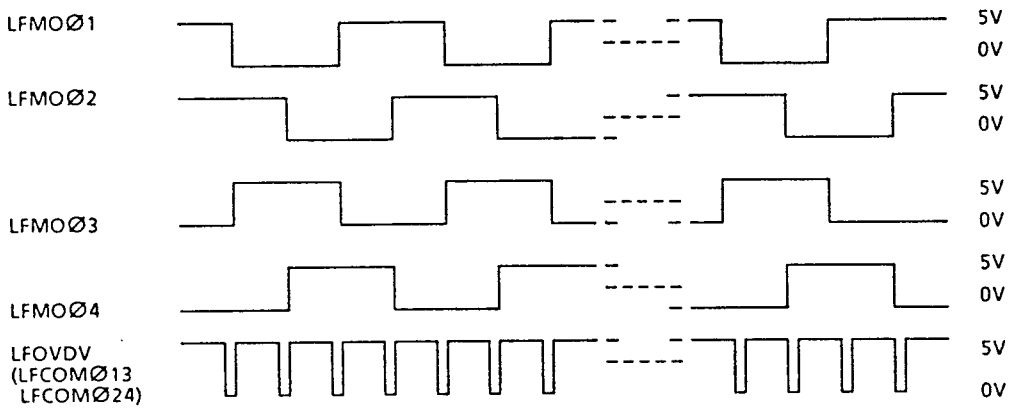


Figure 4-15

(18) Error in Parallel Interface Reception

- Is interface cable connected to CN1 correctly?

Yes No

- Connect interface cable correctly.

- Are output levels of DATA BIT 1 to 8 of interface signal normal?

Yes No

- Replace Q7.

- Is output levels of signals (below) normal?

SELECT, PE, $\overline{\text{ACK}}$, BUSY, $\overline{\text{FAULT}}$, $\overline{\text{I-PRIME}}$

Yes No

- Replace Q7 or Q1.

- Are output levels of signals (below) normal?

$\overline{\text{STB}}$, $\overline{\text{AUTO FEED}}$, $\overline{\text{SLCT IN}}$

Yes No

- Replace Q7.

- Check interface cable and its sending side.

(19) Error in Serial Interface Data Reception

- Is interface cable connected to CN2 correctly?

Yes No

- Connect interface cable correctly.

- Is + 5 V normal? (CN1 pin 18)

Yes No

- Is + 5 V level of Tr7 normal?

Yes No

- Replace Tr7.

- Check + 5 V line at interface side.

- Are all output levels of line driver or receiver (Q4) of interface normal?

RXD (Q4 pin 4), DSR (Q4 pin 1), CTS (Q4 pin 2), CD (Q4 pin 3), TD (Q4 pin 9), DTR (Q4 pin 6) , RTS (Q4 pin 7), SSD (Q4 pin 8)

Yes No

- Replace Q4.

- Check interface cable or data sending side (baud rate and protocol).

COMPONENT PARTS LIST

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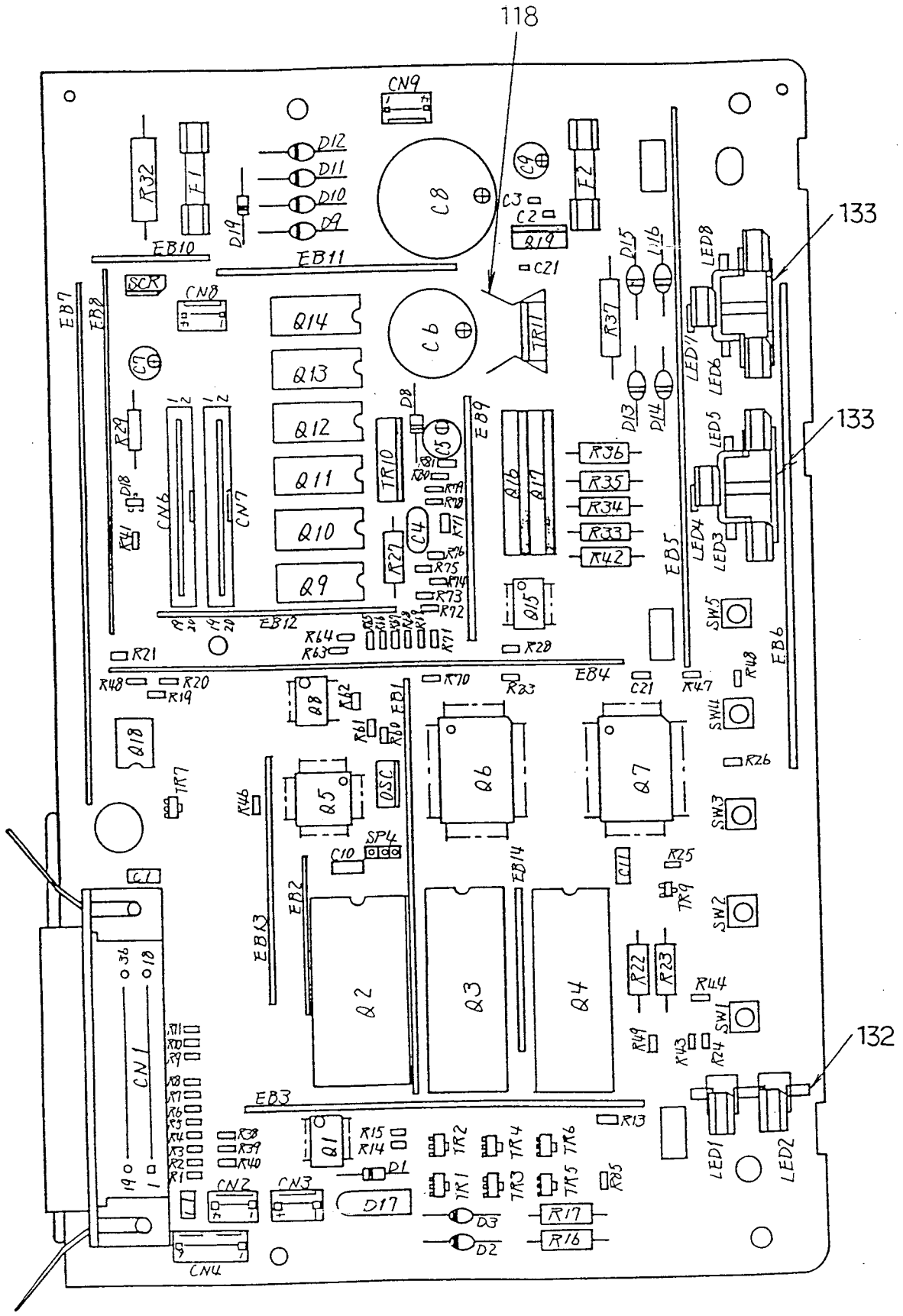
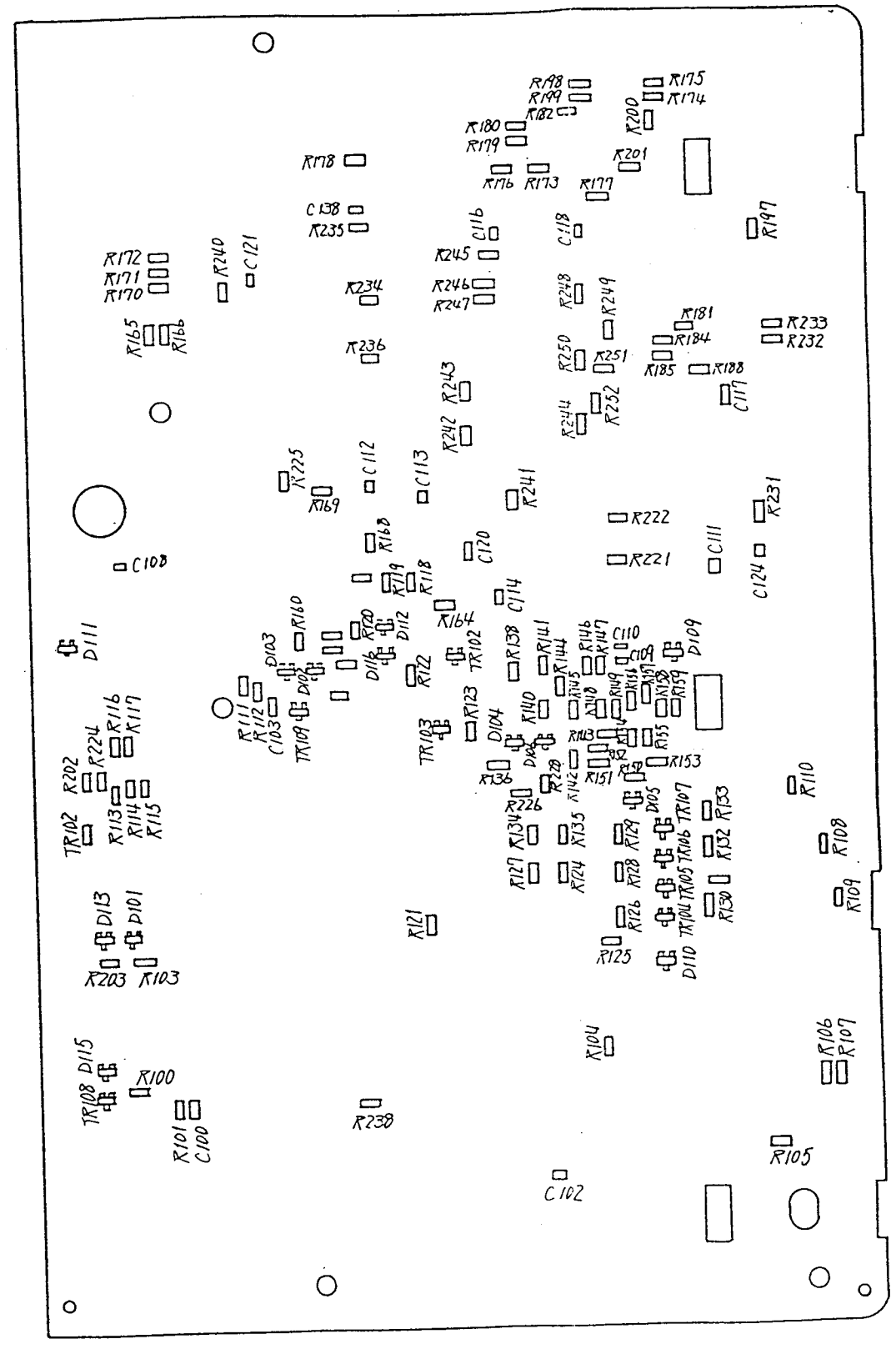




Main Control PCB, UMMB-
(4YA4042-1450G1) 1/2
Rev. No.1 (for 1st Lot~, ODA)
PCB version 4

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (1/7)
Rev. No.1 PCB version 4 (for 1st Lot~)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D111,D113	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
2	D101	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112	MA152WA Signal DI (CP)	611A0029M0002	1	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD15M-B2 Zener DI (CP)	613A0233M0222B	1	
8	D18	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D3,D13-D16	EM1Z/SM-1A-02/DSA1A2 Rectifier DI	610A0003M0001	6	
10	D8	DSA1C1 Rectifier DI	610A0021L0089A	1	
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12	D1	RD110E-B Zener DI	613A1231L0432	1	
13	D17	D1CA20 Diode array	761A2232M0401	1	
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17					
18	R85	RM73B2B300J RN resistor (CP)	323A5015J0300	1	
19	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
20	R144,R148,R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
21	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (2/7)
Rev. No.1 PCB version 4 (for 1st Lot~)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
22	R118,R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	
23	R24,R45, R105-R110,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	9	
24	R116,R117,R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
25	R40,R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	3	
26	R119,R136	RM73B2B471J RN resistor (CP)	323A5015J0471	2	
27	R46,R163,R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
28	R14,R15,R21,R43, R121,R123-R129, R134,R135,R164, R174,R175,R184, R185,R188,R198, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	23	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31	R60-R83	RM73B2B202J RN resistor (CP)	323A5015J0202	24	
32	R1-11,R102,R112, R122,R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	
33	R25,R26,R38,R39, R47,R48,R114, R115,R130-R133, R156,R157,R169, R203,R221,R226, R231-R233,R240	RM73B2B562J RN resistor (CP)	323A5015J0562	22	
34	R13,R44,R49, R173,R176-R180, R182,R200,R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35					
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (3/7)
Rev. No.1 PCB version 4 (for 1st Lot~)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154,R155, R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B683F RN resistor (CP)	323A5015F0683	1	
44	R138	RM73B2B562F RN resistor (CP)	323A5015F0562	1	
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R141,R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	3	
47	R145	RM73B2B103F RN resistor (CP)	323A5015F0103	1	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B752F RN resistor (CP)	323A5015F0752	1	
51	R150,R153,R158, R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B513F RN resistor (CP)	323A5015F0513	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R151,R152	RM73B2B302F RN resistor (CP)	323A5015F0302	2	
55	R235	MCR18-JPW Chip jumper (CP)	323A5011P0001	1	
56	R16,17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (4/7)
Rev. No.1 PCB version 4 (for 1st Lot~)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	
59	R22,R23	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	2	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	1	
62	R37	MOR2B39ΩJ RS resistor	324A1121J0390	1	
63	R32	MOR2B3.0KΩJ RS resistor	324A1121J0302	1	
64					
65					
66	C12,C100,C103, C106,C119,C120	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	
67	C102,C108, C111-C114,C116, C118,C121,C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	10	
68	C109,C110	CK2012R1H223K 50V CK capacitor (CP)	303A6008Z3223	2	
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008Z3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-F0 CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76	C10,C11	CK92F1E105ZS 25V CK capacitor 1μF	303A4117Z2105	2	
77	C6	16VBSN-8200(M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (5/7)
Rev. No.1 PCB version 4 (for 1st Lot~)

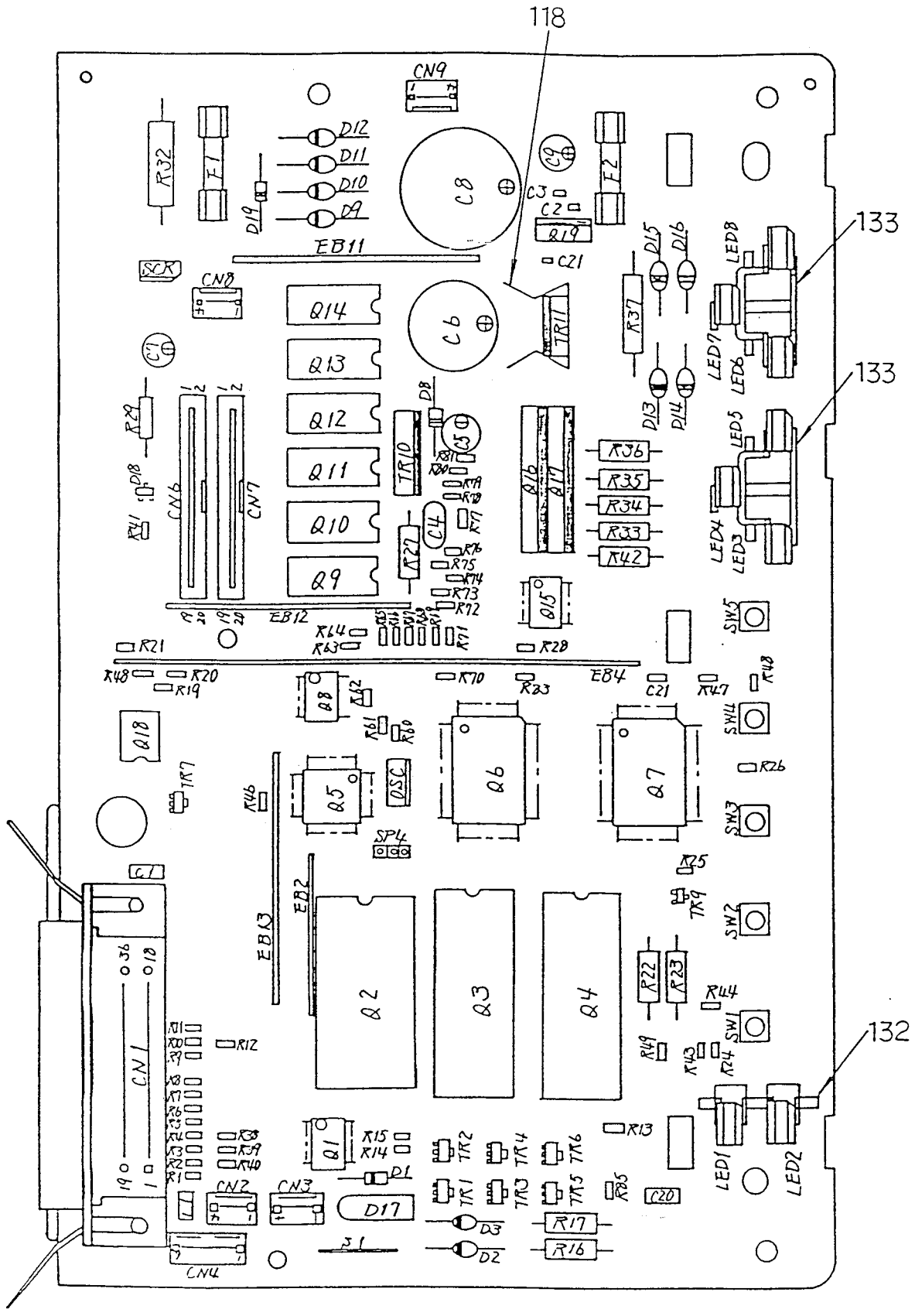
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
79					
80					
81	Q5	MSM83C154-551GS-V1K MOS-CPU(ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW MOS-EEPROM	816A8020M0000	1	
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC	720A0503N0007	2	
86	Q16,Q17	STA434A Transistor array	760A4726M0001	2	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	74LS06FP BIP digital IC (SO)	700A0503N0006	1	
89	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
90	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
91	Q3	RP231026E-5101 MOS-MROM	817A0639M0001	1	
92	Q2	DL2-28A-05 IC socket	245A1155P0280	1	
93	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
94	F2	SB1.6-125V1.6A Fuse	540A2046M1162	1	
95	TR103	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	1	
96	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
97	TR5,TR6	2SB1123 PNP-LF-TR (CP)	601A1032N0002	2	
98	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
99	TR9,TR102, TR104-TR107	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (6/7)
Rev. No.1 PCB version 4 (for 1st Lot~)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
100	TR1-TR4	2SD1472 NPN-LF-TR (CP)	603A1121N0007	4	
101	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	
102	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
103					
104					
105					
106	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
107		DIC-S252 PC connector	224A3182P0021	1	
108	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
109	F2	SB1.6-125V1.6A Fuse	540A2046M1162	1	
110	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
111	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
112	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
113	CN1	57RE-40360-730B-D29A Square connector	220A1783P0360	1	
114	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
115	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
116	LED1-LED8	SLP-265B LED	650A0344M0003	8	
117	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
118		Heat sink	4PP4021-1015P001	1	
119	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
120	F1,F2	FP-213 Fuse holder	4LP-7142	4	
121	EB1	Power bar L=76.2	3LH-31313-39	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (7/7)
Rev. No.1 PCB version 4 (for 1st Lot~)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
122	EB2,EB14	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	2	
123	EB3	Power bar L=76.2	3LH-31313-147	1	
124	EB4	Power bar L=99.06	3LH-31313-19	1	
125	EB5	Power bar L=106.68	3LH-31313-2	1	
126	EB6	Power bar L=91.44 P=30.48 N=4	3LH-31313-86	1	
127	EB7	Power bar L=99.06	3LH-31313-1	1	
128	EB8	Power bar L=68.58 P=22.86 N=4	3LH-31313-17	1	
129	EB9,EB11,EB13	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	3	
130	EB10	Power bar L=22.86 P=22.86 N=2	3LH-31313-15	1	
131	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
132		LED stand (A)	3PP4043-3659P001	1	
133		LED stand (B)	3PP4043-3716P001	2	
134	Q2	Program ROM	4YR4077-1623G1	1	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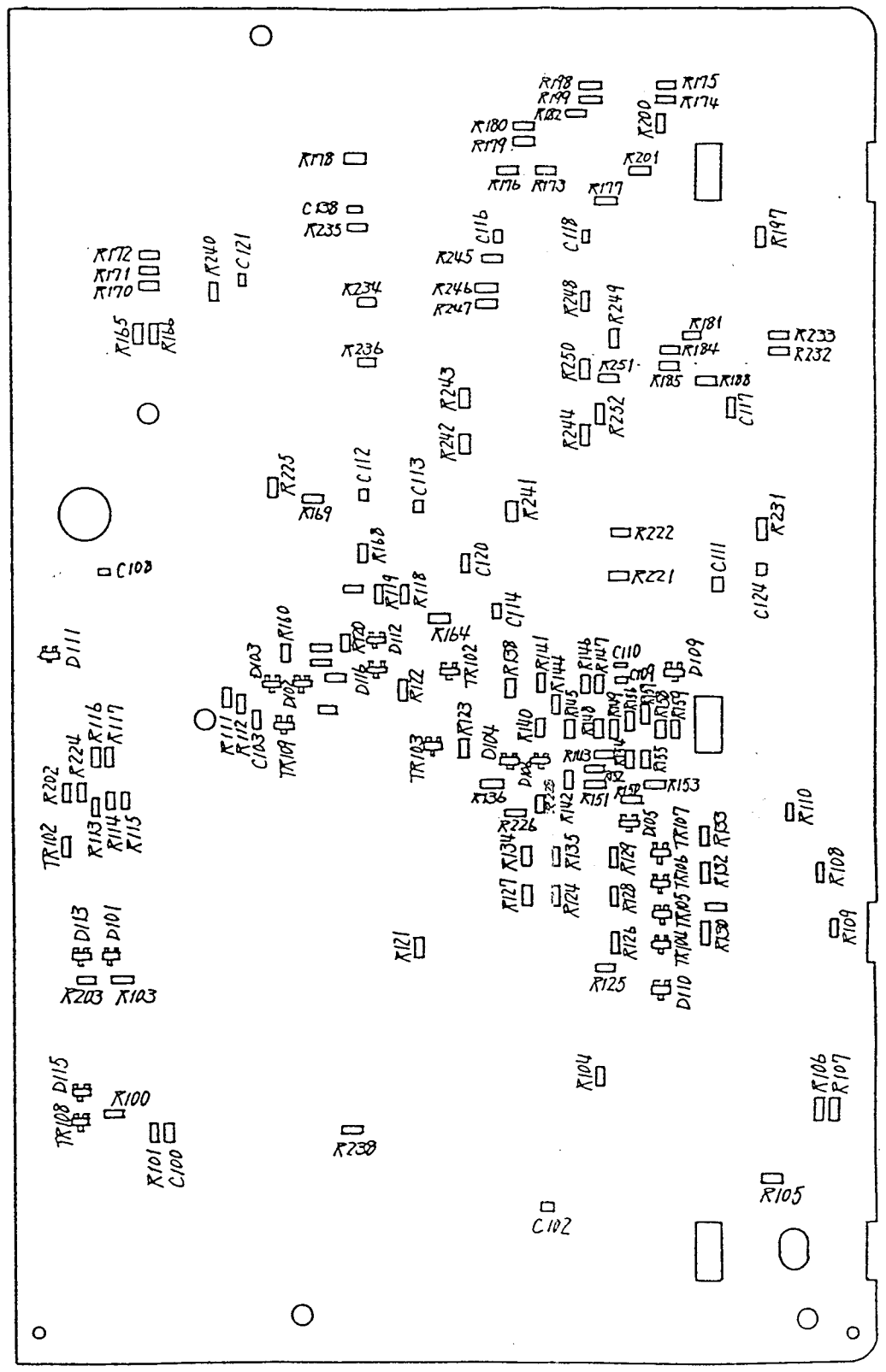
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Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (1/7)
Rev. No.1 PCB version 4 (for 2nd Lot~, ODA)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D111,D113	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
2	D101	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112	MA152WA Signal DI (CP)	611A0029M0002	1	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD15M-B2 Zener DI (CP)	613A0233M0222B	1	
8	D18	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D3,D13-D16	EM1Z/SM-1A-02/DSA1A2 Rectifier DI	610A0003M0001	6	
10	D8	DSA1C1 Rectifier DI	610A0021L0089A	1	
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12	D1	RD110E-B Zener DI	613A1231L0432	1	
13	D17	D1CA20 Diode array	761A2232M0401	1	
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17					
18	R85	RM73B2B300J RN resistor (CP)	323A5015J0300	1	
19	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
20	R144,R148,R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
21	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (2/7)
Rev. No.1 PCB version 4 (for 2nd Lot~, ODA)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
22	R118,R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	
23	R24,R45, R105-R110,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	9	
24	R116,R117,R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
25	R40,R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	3	
26	R119,R136	RM73B2B471J RN resistor (CP)	323A5015J0471	2	
27	R46,R163,R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
28	R14,R15,R21,R43, R121,R123-R129, R134,R135,R164, R174,R175,R184, R185,R188,R198, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	23	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31	R60-R83	RM73B2B202J RN resistor (CP)	323A5015J0202	24	
32	R1-11,R102,R112, R122,R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	
33	R25,R26,R38,R39, R47,R48,R114, R115,R130-R133, R156,R157,R169, R203,R221,R226, R231-R233,R240	RM73B2B562J RN resistor (CP)	323A5015J0562	22	
34	R13,R44,R49, R173,R176-R180, R182,R200,R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35					
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (3/7)
Rev. No.1 PCB version 4 (for 2nd Lot~, ODA)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154,R155, R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B683F RN resistor (CP)	323A5015F0683	1	
44	R138	RM73B2B562F RN resistor (CP)	323A5015F0562	1	
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R141,R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	3	
47	R145	RM73B2B103F RN resistor (CP)	323A5015F0103	1	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B752F RN resistor (CP)	323A5015F0752	1	
51	R150,R153,R158, R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B513F RN resistor (CP)	323A5015F0513	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R151,R152	RM73B2B302F RN resistor (CP)	323A5015F0302	2	
55	R235	MCR18-JPW Chip jumper (CP)	323A5011P0001	1	
56	R16,17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (4/7)
Rev. No.1 PCB version 4 (for 2nd Lot~, ODA)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	
59	R22,R23	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	2	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	1	
62	R37	MOR2B39ΩJ RS resistor	324A1121J0390	1	
63	R32	MOR2B3.0KΩJ RS resistor	324A1121J0302	1	
64					
65					
66	C12,C100,C103, C106,C119	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	
67	C102,C108, C111-C114,C116, C118,C121,C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	10	
68	C109,C110	CK2012R1H223K 50V CK capacitor (CP)	303A6008Z3223	2	
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008Z3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-F0 CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76					
77	C6	16VBSN-8200(M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (5/7)
Rev. No.1 PCB version 4 (for 2nd Lot~, ODA)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
79					
80					
81	Q5	MSM83C154-551GS-V1K MOS-CPU(ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW MOS-EEPROM	816A8020M0000	1	
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC	720A0503N0007	2	
86	Q16,Q17	STA434A Transistor array	760A4726M0001	2	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	74LS06FP BIP digital IC (SO)	700A0503N0006	1	
89	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
90	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
91	Q3	RP231026E-5101 MOS-MROM	817A0639M0001	1	
92	Q2	DL2-28A-05 IC socket	245A1155P0280	1	
93	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
94	F2	SB1.6-125V1.6A Fuse	540A2046M1162	1	
95	TR103	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	1	
96	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
97	TR5,TR6	2SB1123 PNP-LF-TR (CP)	601A1032N0002	2	
98	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
99	TR9,TR102, TR104-TR107	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (6/7)
Rev. No.1 PCB version 4 (for 2nd Lot~, ODA)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
100	TR1-TR4	2SD1472 NPN-LF-TR (CP)	603A1121N0007	4	
101	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	
102	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
103					
104					
105					
106	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
107		DIC-S252 PC connector	224A3182P0021	1	
108	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
109	F2	SB1.6-125V1.6A Fuse	540A2046M1162	1	
110	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
111	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
112	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
113	CN1	57RE-40360-730B-D29A Square connector	220A1783P0360	1	
114	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
115	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
116	LED1-LED8	SLP-265B LED	650A0344M0003	8	
117	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
118		Heat sink	4PP4021-1015P001	1	
119	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
120	F1,F2	FP-213 Fuse holder	4LP-7142	4	
121					

Main Control PCB, UMMB- (4YA4042-1450G1) 2/2 (7/7)
Rev. No.1 PCB version 4 (for 2nd Lot~, ODA)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
122	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
123					
124	EB4	Power bar L=99.06	3LH-31313-19	1	
125					
126					
127					
128					
129	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
130					
131	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
132		LED stand (A)	3PP4043-3659P001	1	
133		LED stand (B)	3PP4043-3716P001	2	
134	Q2	Program ROM	4YR4077-1623G1	1	

Main Control PCB, UMMB- (4YA4042-1450G11) 2/2 (1/7)
Rev. No.1 PCB version 4 (for 2nd Lot, ODA Maintenance)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D111,D113	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
2	D101	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112	MA152WA Signal DI (CP)	611A0029M0002	1	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD15M-B2 Zener DI (CP)	613A0233M0222B	1	
8	D18	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D3,D13-D16	EM1Z/SM-1A-02/DSA1A2 Rectifier DI	610A0003M0001	6	
10	D8	DSA1C1 Rectifier DI	610A0021L0089A	1	
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12	D1	RD110E-B Zener DI	613A1231L0432	1	
13	D17	D1CA20 Diode array	761A2232M0401	1	
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17					
18	R85	RM73B2B300J RN resistor (CP)	323A5015J0300	1	
19	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
20	R144,R148,R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
21	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	

Main Control PCB, UMMB- (4YA4042-1450G11) 2/2 (2/7)
Rev. No.1 PCB version 4 (for 2nd Lot, ODA Maintenance)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
22	R118,R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	
23	R24,R45, R105-R110,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	9	
24	R116,R117,R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
25	R40,R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	3	
26	R119,R136	RM73B2B471J RN resistor (CP)	323A5015J0471	2	
27	R46,R163,R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
28	R14,R15,R21,R43, R121,R123-R129, R134,R135,R164, R174,R175,R184, R185,R188,R198, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	23	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31	R60-R83	RM73B2B202J RN resistor (CP)	323A5015J0202	24	
32	R1-11,R102,R112, R122,R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	
33	R25,R26,R38,R39, R47,R48,R114, R115,R130-R133, R156,R157,R169, R203,R221,R226, R231-R233,R240	RM73B2B562J RN resistor (CP)	323A5015J0562	22	
34	R13,R44,R49, R173,R176-R180, R182,R200,R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35					
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	

Main Control PCB, UMMB- (4YA4042-1450G11) 2/2 (3/7)
Rev. No.1 PCB version 4 (for 2nd Lot, ODA Maintenance)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154,R155, R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B683F RN resistor (CP)	323A5015F0683	1	
44	R138	RM73B2B562F RN resistor (CP)	323A5015F0562	1	
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R141,R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	3	
47	R145	RM73B2B103F RN resistor (CP)	323A5015F0103	1	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B752F RN resistor (CP)	323A5015F0752	1	
51	R150,R153,R158, R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B513F RN resistor (CP)	323A5015F0513	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R151,R152	RM73B2B302F RN resistor (CP)	323A5015F0302	2	
55	R235	MCR18-JPW Chip jumper (CP)	323A5011P0001	1	
56	R16,17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	

Main Control PCB, UMMB- (4YA4042-1450G11) 2/2 (4/7)
Rev. No.1 PCB version 4 (for 2nd Lot, ODA Maintenance)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	
59	R22,R23	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	2	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	1	
62	R37	MOR2B39ΩJ RS resistor	324A1121J0390	1	
63	R32	MOR2B3.0KΩJ RS resistor	324A1121J0302	1	
64					
65					
66	C12,C100,C103, C106,C119	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	
67	C102,C108, C111-C114,C116, C118,C121,C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	10	
68	C109,C110	CK2012R1H223K 50V CK capacitor (CP)	303A6008Z3223	2	
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008Z3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-F0 CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	303A4117Z2105	1	
76					
77	C6	16VBSN-8200(M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	

Main Control PCB, UMMB- (4YA4042-1450G11) 2/2 (5/7)
Rev. No.1 PCB version 4 (for 2nd Lot, ODA Maintenance)

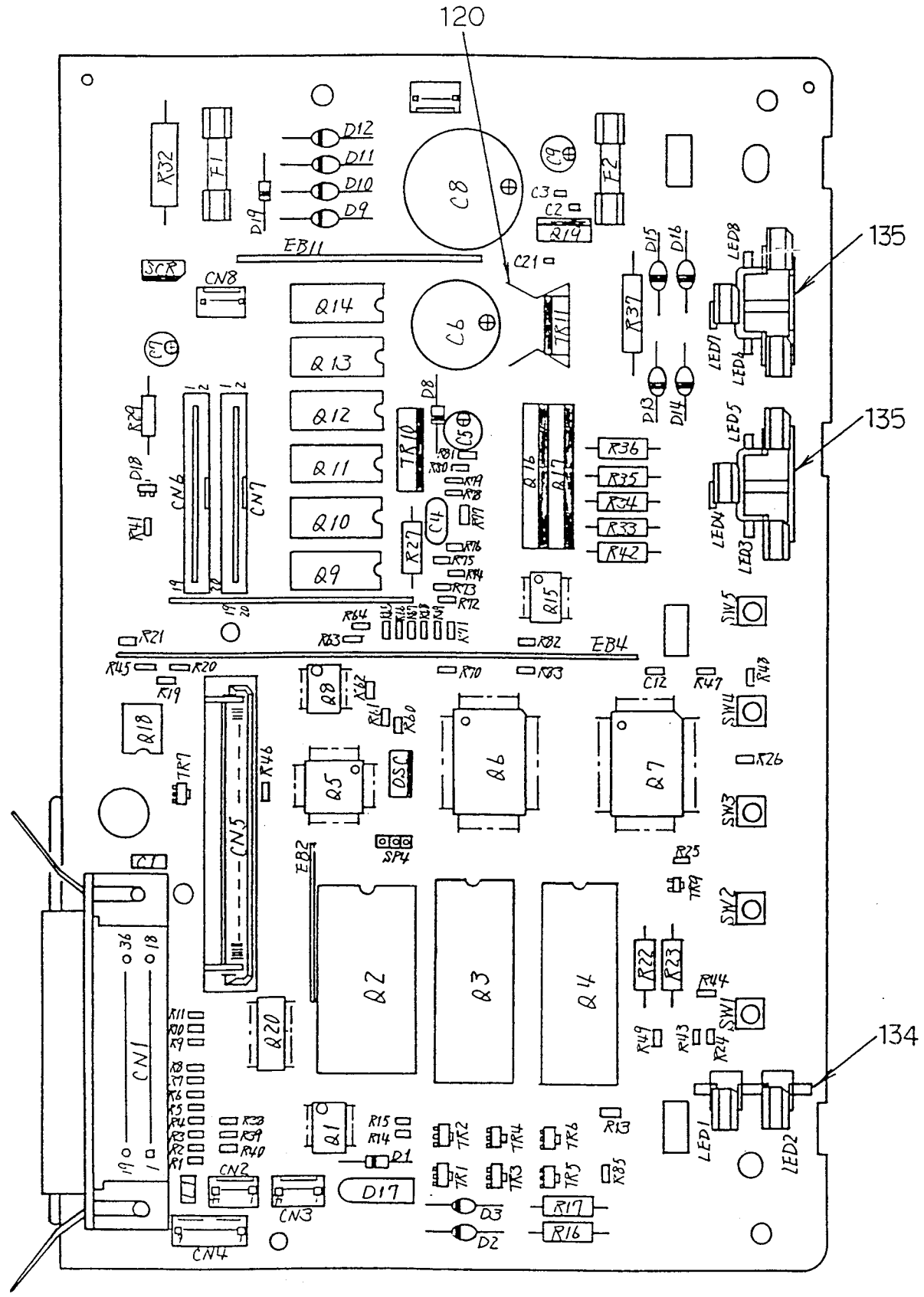
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
79					
80					
81	Q5	MSM83C154-551GS-V1K MOS-CPU(ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW MOS-EEPROM	816A8020M0000	1	
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC	720A0503N0007	2	
86	Q16,Q17	STA434A Transistor array	760A4726M0001	2	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	74LS06FP BIP digital IC (SO)	700A0503N0006	1	
89	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
90	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
91	Q3	RP231026E-5101 MOS-MROM	817A0639M0001	1	
92	Q2	DL2-28A-05 IC socket	245A1155P0280	1	
93					
94					
95	TR103	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	1	
96	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
97	TR5,TR6	2SB1123 PNP-LF-TR (CP)	601A1032N0002	2	
98	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
99	TR9,TR102, TR104-TR107	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	
100	TR1-TR4	2SD1472 NPN-LF-TR (CP)	603A1121N0007	4	

Main Control PCB, UMMB- (4YA4042-1450G11) 2/2 (6/7)
Rev. No.1 PCB version 4 (for 2nd Lot, ODA Maintenance)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
101	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	
102	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
103					
104					
105					
106	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
107		DIC-S252 PC connector	224A3182P0021	1	
108	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
109	F2	SB1.6-125V1.6A Fuse	540A2046M1162	1	
110	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
111	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
112	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
113	CN1	57RE-40360-730B-D29A Square connector	220A1783P0360	1	
114	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
115	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
116	LED1-LED8	SLP-265B LED	650A0344M0003	8	
117	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
118		Heat sink	4PP4021-1015P001	1	
119	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
120	F1,F2	FP-213 Fuse holder	4LP-7142	4	
121					
122	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
123					

Main Control PCB, UMMB- (4YA4042-1450G11) 2/2 (7/7)
Rev. No.1 PCB version 4 (for 2nd Lot, ODA Maintenance)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
124	EB4	Power bar L=99.06	3LH-31313-19	1	
125					
126					
127					
128					
129	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
130					
131	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
132		LED stand (A)	3PP4043-3659P001	1	
133		LED stand (B)	3PP4043-3716P001	2	



Main Control PCB, UMMB-2
(4YA4042-1450G2, G12) 1/2
for OEL, OEL maintenance

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (1/7) for OEL

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D111,D113	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
2	D101	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112	MA152WA Signal DI (CP)	611A0029M0002	1	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD15M-B2 Zener DI (CP)	613A0233M0222B	1	
8	D18	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D3,D13-D16	EM1Z/SM-1A-02/DSA1A2 Rectifier DI	610A0003M0001	6	
10	D8	DSA1C1 Rectifier DI	610A0021L0089A	1	
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12	D1	RD110E-B Zener DI	613A1231L0432	1	
13	D17	D1CA20 Diode array	761A2232M0401	1	
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17	R85	RM73B2B300J RN resistor (CP)	323A5015J0300	1	
18	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
19	R144,R148,R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
20	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	
21	R118,R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (2/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
22	R24,R45, R105-R110,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	9	
23	R116,R117,R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
24	R40,R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	3	
25	R119,R136	RM73B2B471J RN resistor (CP)	323A5015J0471	2	
26	R46,R163,R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
27	R204,R205, R208-R210,R213, R214,R218,R219	RM73B2B681J RN resistor (CP)	323A5015J0681	9	
28	R14,R15,R21,R43, R121,R123-R129, R134,R135,R164, R174,R175,R184, R185,R188,R198, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	23	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31	R60-R83	RM73B2B202J RN resistor (CP)	323A5015J0202	24	
32	R1-11,R102,R112, R122,R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	
33	R25,R26,R38,R39, R47,R48,R114, R115,R130-R133, R156,R157,R169, R183,R203,R221, R226,R231-R233, R240	RM73B2B562J RN resistor (CP)	323A5015J0562	23	
34	R13,R44,R49, R173,R176-R180, R182,R200,R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35					
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (3/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154,R155, R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B683F RN resistor (CP)	323A5015F0683	1	
44	R138	RM73B2B562F RN resistor (CP)	323A5015F0562	1	
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R141,R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	3	
47	R145	RM73B2B103F RN resistor (CP)	323A5015F0103	1	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B752F RN resistor (CP)	323A5015F0752	1	
51	R150,R153,R158, R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B513F RN resistor (CP)	323A5015F0513	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R151,R152	RM73B2B302F RN resistor (CP)	323A5015F0302	2	
55	R235	MCR18-JPW Chip jumper (CP)	323A5011P0001	1	
56	R16,17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (4/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
59	R22,R23	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	2	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	1	
62	R37	MOR2B39ΩJ RS resistor	324A1121J0390	1	
63	R32	MOR2B3.0KΩJ RS resistor	324A1121J0302	1	
64					
65					
66	C12,C100,C103, C106,C119,C120	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	
67	C102,C108, C111-C114,C116, C118,C121,C122, C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	11	
68					
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008K3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-FO CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76					
77	C6	16VBSN-8200(M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	
79					
80					

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
81	Q5	MSM83C154-551GS-V1K (FP) MOS-CPU(ROM)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW MOS-EEPROM	816A8020M0000	1	
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 (SO) BIP linear IC	720A0503N0007	2	
86	Q16,Q17	STA434A Transistor array	760A4726M0001	2	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	74LS06FP (SO) BIP digital IC	700A0503N0006	1	
89	Q20	74LS245FP (SO) BIP digital IC	700A0503N0245	1	
90	Q7	LC92018B-283 (FP) MOS digital IC	702A4931N0001	1	
91	Q6	LC92011B-358 (FP) MOS digital IC	702A4931N0002	1	
92	Q3	RP231026E-5102 MOS-MROM	817A0639M0002	1	
93	Q2	DL2-28A-05 IC socket	245A1155P0280	1	
94					
95					
96	TR103	2SA1331/2SA1037K (CP) PNP-HF-TR	600A1003N0002	1	
97	TR108,TR109	A1344/UN2111/DTA114K (CP) PNP-HF-TR	600A1003N0003	2	
98	TR5,TR6	2SB1123 (CP) PNP-LF-TR	601A1032N0002	2	
99	TR7	2SB766A-Q/R (CP) PNP-LF-TR	601A1130M0001	1	
100	TR9,TR102, TR104-TR107	2SC3361/2SC2412K (CP) NPN-HF-TR	602A1003N0002	6	
101	TR1-TR4	2SD1472 (CP) NPN-LF-TR	603A1121N0007	4	
102	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (6/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
103	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
104					
105					
106					
107	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
108		DIC-S252 PC connector	224A3182P0021	1	
109	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
110	F2	SB1.6-125V1.6A Fuse	540A2046M1162	1	
111	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
112	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
113	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
114	CN1	57RE-40360-730B-D29A Square connector	220A1783P0360	1	
115	CN5	2PJ48D2S PC connector	224A1281P0483	1	
116	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
117	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
118	LED1-LED8	SLP-265B LED	650A0344M0003	8	
119	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
120		Heat sink	4PP4021-1015P001	1	
121	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
122	F1,F2	FP-213 Fuse holder	4LP-7142	4	
123					
124	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
125					

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (7/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
126	EB4	Power bar L=99.06	3LH-31313-19	1	
127					
128					
129					
130					
131	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
132					
133	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
134		LED stand (A)	3PP4043-3659P001	1	
135		LED stand (B)	3PP4043-3716P001	2	
136	Q2	Program ROM	4YR4077-1249G1	1	

Main Control PCB, UMMB-2 (4YA4042-1450G12) 2/2 (1/7)
for OEL maintenance

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D111,D113	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
2	D101	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112	MA152WA Signal DI (CP)	611A0029M0002	1	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD15M-B2 Zener DI (CP)	613A0233M0222B	1	
8	D18	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D3,D13-D16	EM1Z/SM-1A-02/DSA1A2 Rectifier DI	610A0003M0001	6	
10	D8	DSA1C1 Rectifier DI	610A0021L0089A	1	
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12	D1	RD110E-B Zener DI	613A1231L0432	1	
13	D17	D1CA20 Diode array	761A2232M0401	1	
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17	R85	RM73B2B300J RN resistor (CP)	323A5015J0300	1	
18	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
19	R144,R148,R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
20	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	
21	R118,R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
22	R24,R45, R105-R110,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	9	
23	R116,R117,R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
24	R40,R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	3	
25	R119,R136	RM73B2B471J RN resistor (CP)	323A5015J0471	2	
26	R46,R163,R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
27	R204,R205, R208-R210,R213, R214,R218,R219	RM73B2B681J RN resistor (CP)	323A5015J0681	9	
28	R14,R15,R21,R43, R121,R123-R129, R134,R135,R164, R174,R175,R184, R185,R188,R198, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	23	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31	R60-R83	RM73B2B202J RN resistor (CP)	323A5015J0202	24	
32	R1-11,R102,R112, R122,R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	
33	R25,R26,R38,R39, R47,R48,R114, R115,R130-R133, R156,R157,R169, R183,R203,R221, R226,R231-R233, R240	RM73B2B562J RN resistor (CP)	323A5015J0562	22	
34	R13,R44,R49, R173,R176-R180, R182,R200,R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35					
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	

Main Control PCB, UMMB-2 (4YA4042-1450G12) 2/2 (3/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154,R155, R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B683F RN resistor (CP)	323A5015F0683	1	
44	R138	RM73B2B562F RN resistor (CP)	323A5015F0562	1	
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R141,R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	3	
47	R145	RM73B2B103F RN resistor (CP)	323A5015F0103	1	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B752F RN resistor (CP)	323A5015F0752	1	
51	R150,R153,R158, R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B513F RN resistor (CP)	323A5015F0513	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R151,R152	RM73B2B302F RN resistor (CP)	323A5015F0302	2	
55	R235	MCR18-JPW Chip jumper (CP)	323A5011P0001	1	
56	R16,17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	

Main Control PCB, UMMB-2 (4YA4042-1450G12) 2/2 (4/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
59	R22,R23	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	2	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	1	
62	R37	MOR2B39ΩJ RS resistor	324A1121J0390	1	
63	R32	MOR2B3.0KΩJ RS resistor	324A1121J0302	1	
64					
65	S1	Short wire (U type) 0.65 P=15	5KH-31036-150	1	
66	C12,C100,C103, C106,C119,C120	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	
67	C102,C108, C111-C114,C116, C118,C121,C122, C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	11	
68					
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008Z3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-F0 CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76					
77	C6	16VBSN-8200(M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	
79					

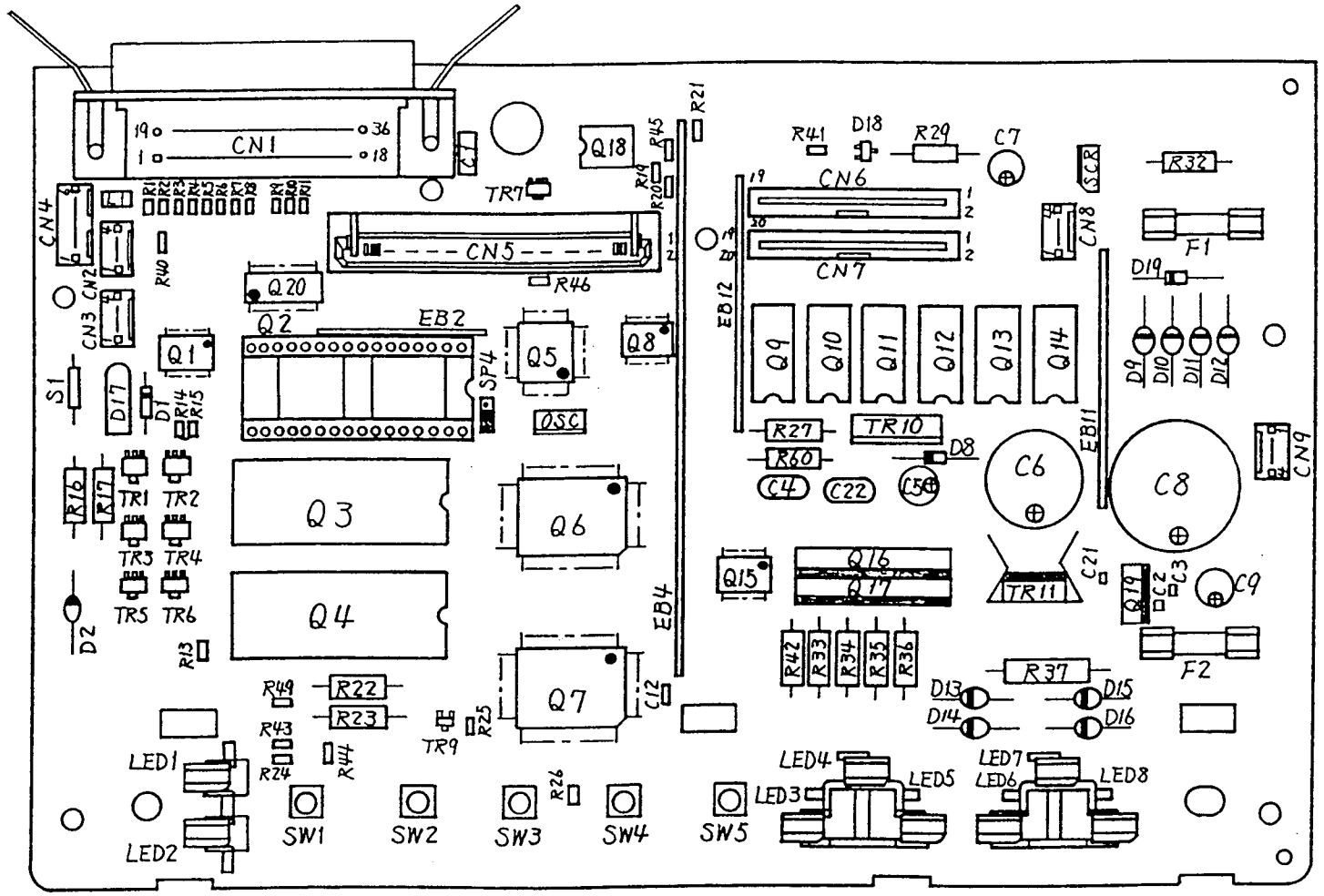
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
80					
81	Q5	MSM83C154-551GS-V1K MOS-CPU(ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW MOS-EEPROM	816A8020M0000	1	
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC	720A0503N0007	2	
86	Q16,Q17	STA434A Transistor array	760A4726M0001	2	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	74LS06FP BIP digital IC (SO)	700A0503N0006	1	
89	Q20	74LS245FP BIP digital IC (SO)	700A0503N0245	1	
90	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
91	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
92	Q3	RP231026E-5101 MOS-MROM	817A0639M0001	1	
93	Q2	DL2-28A-05 IC socket	245A1155P0280	1	
94					
95					
96	TR103	2SA1331/2SA1037K PNP-HF-TR	600A1003N0002	1	
97	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
98	TR5,TR6	2SB1123 PNP-LF-TR (CP)	601A1032N0002	2	
99	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
100	TR9,TR102, TR104-TR107	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	
101	TR1-TR4	2SD1472 NPN-LF-TR (CP)	603A1121N0007	4	

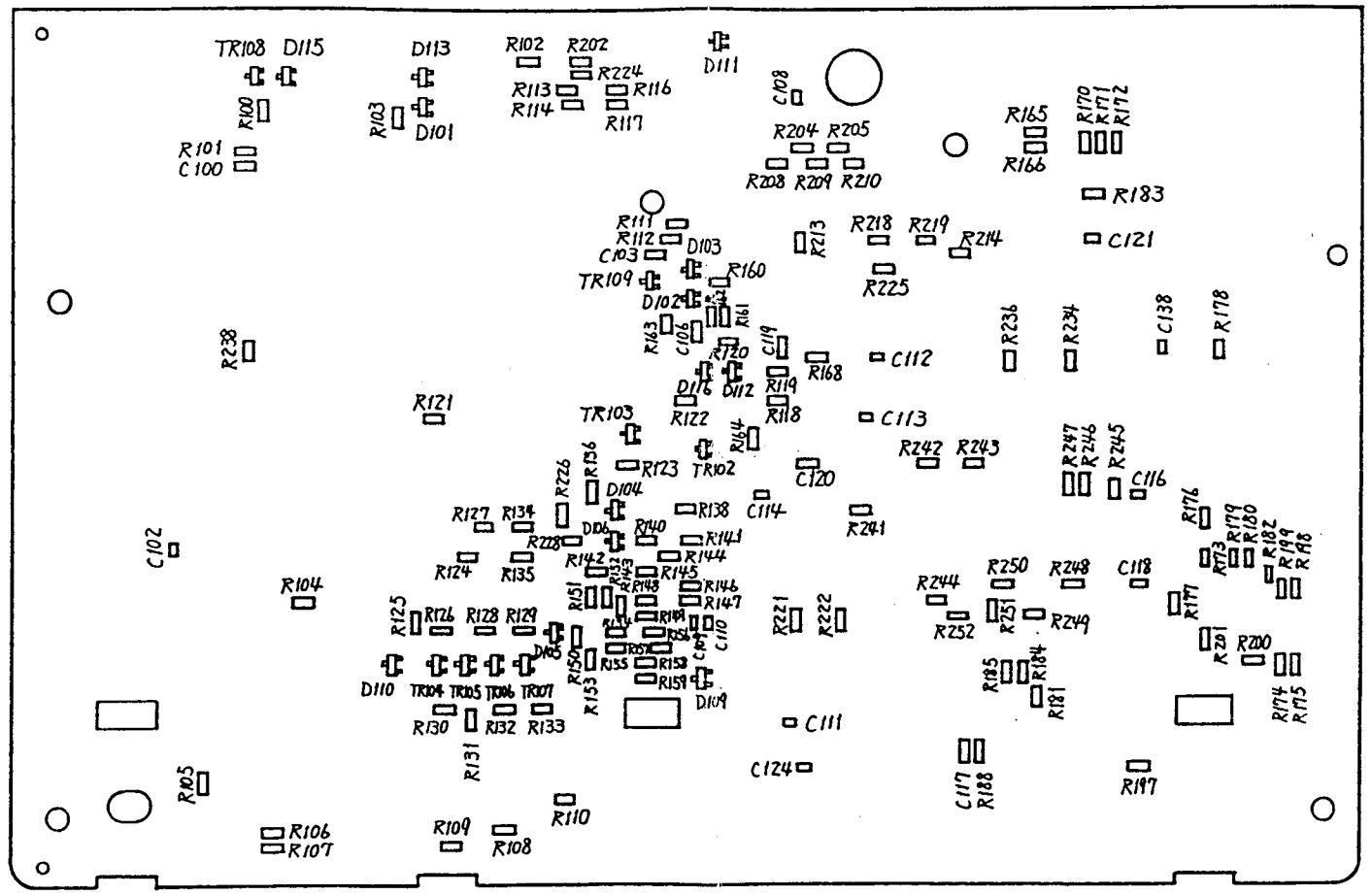
Main Control PCB, UMMB-2 (4YA4042-1450G12) 2/2 (6/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
102	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	
103	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
104					
105					
106					
107	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
108		DIC-S252 PC connector	224A3182P0021	1	
109	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
110	F2	SB1.6-125V1.6A Fuse	540A2046M1162	1	
111	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
112	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
113	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
114	CN1	57RE-40360-730B-D29A Square connector	220A1783P0360	1	
115	CN5	2PJ48D2S PC connector	224A1281P0483	1	
116	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
117	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
118	LED1-LED8	SLP-265B LED	650A0344M0003	8	
119	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
120		Heat sink	4PP4021-1015P001	1	
121	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
122	F1,F2	FP-213 Fuse holder	4LP-7142	4	
123					

Main Control PCB, UMMB-2 (4YA4042-1450G12) 2/2 (7/7)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
124	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
125					
126	EB4	Power bar L=99.06	3LH-31313-19	1	
127					
128					
129					
130					
131	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
132					
133	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
134		LED stand (A)	3PP4043-3659P001	1	
135		LED stand (B)	3PP4043-3716P001	2	





Main Control PCB, UMMB-2
(4YA4042-1450G2) 1/2
Rev. No.1 (for OEL)
PCB version 5

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (1/8) for OEL
PCB REV.1 VERSION 5

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D111, D113	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
2	D101	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112	MA152WA Signal DI (CP)	611A0029M0002	1	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD6.8M-B2 Zener DI (CP)	613A0233M0142B	1	
8	D18	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D8, D13-D16	EM1Z/SM-1A-02/ DSA1A2/DSM1D2 Rectifier DI	610A0003M0001	6	
10					
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12	D1	RD110E-B Zener DI	613A1231L0432	1	
13	D17	D1CA20 Diode array	761A2232M0401	1	
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17					
18	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (2/8)
PCB REV.1 VERSION 5

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
19	R144,R148, R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
20	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	
21	R118, R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	
22	R24,R40,R45, R105-R110, R136,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	11	
23	R116,R117, R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
24	R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	2	
25	R119	RM73B2B471J RN resistor	323A5015J0471	1	
26	R46,R163, R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
27	R204,R205, R208,R209, R210,R213, R214,R218, R219	RM73B2B681J RN resistor (CP)	323A5015J0681	9	
28	R14,R15,R21, R43,R121, R123-R129, R134,R135, R164,R174, R175,R184, R185,R188, R198,R199, R238	RM73B2B102J RN resistor (CP)	323A5015J0102	23	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31					

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (3/8)
PCB REV.1 VERSION 5

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
32	R1-R11,R102, R112,R122, R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	
33	R25,R26,R114, R130-R133, R156,R157, R183,R221	RM73B2B562J RN resistor (CP)	323A5015J0562	11	
34	R13,R44,R49, R173, R176-R180, R182,R200, R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35	R226	RM73B2B753J RN resistor (CP)	323A5015J0753	1	
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154, R155,R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B623F RN resistor (CP)	323A5015F0623	1	
44					
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	2	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (4/8)
PCB REV.1 VERSION 5

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
47	R141,R145	RM73B2B912F RN resistor (CP)	323A5015F0912	2	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B153F RN resistor (CP)	323A5015F0153	1	
51	R150,R153, R158,R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B563F RN resistor (CP)	323A5015F0563	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R138,R151, R152	RM73B2B302F RN resistor (CP)	323A5015F0302	3	
55					
56	R16,R17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	
59	R22,R23,R60	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	3	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	1	
62	R37	MOR2B39ΩJ RS resistor	321A1121J0390	1	
63	R32	MOR2B3.0ΩJ RS resistor	321A1121J0302	1	
64					
65					

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (5/8)
PCB REV.1 VERSION 5

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
66	C12,C100, C103,C106, C119,C120	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	
67	C102,C108, C111-C114, C116,C118, C121,C122, C124	CK3216F1E104Z 25V CK capacitor (CP)	303A6008Z2104	11	
68					
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008K3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-FO CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76					
77	C6	16VBSN-8200 (M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	
79					
80	C22	C2FEC1H223K-FO 50V Film capacitor 0.022μF	306A2026K1223	1	
81	Q5	MSM83C154-551GS-V1K MOS-CPU (ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW/NMC9306N-NW MOS-EEPROM	816A8020M0001	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (6/8)
PCB REV.1 VERSION 5

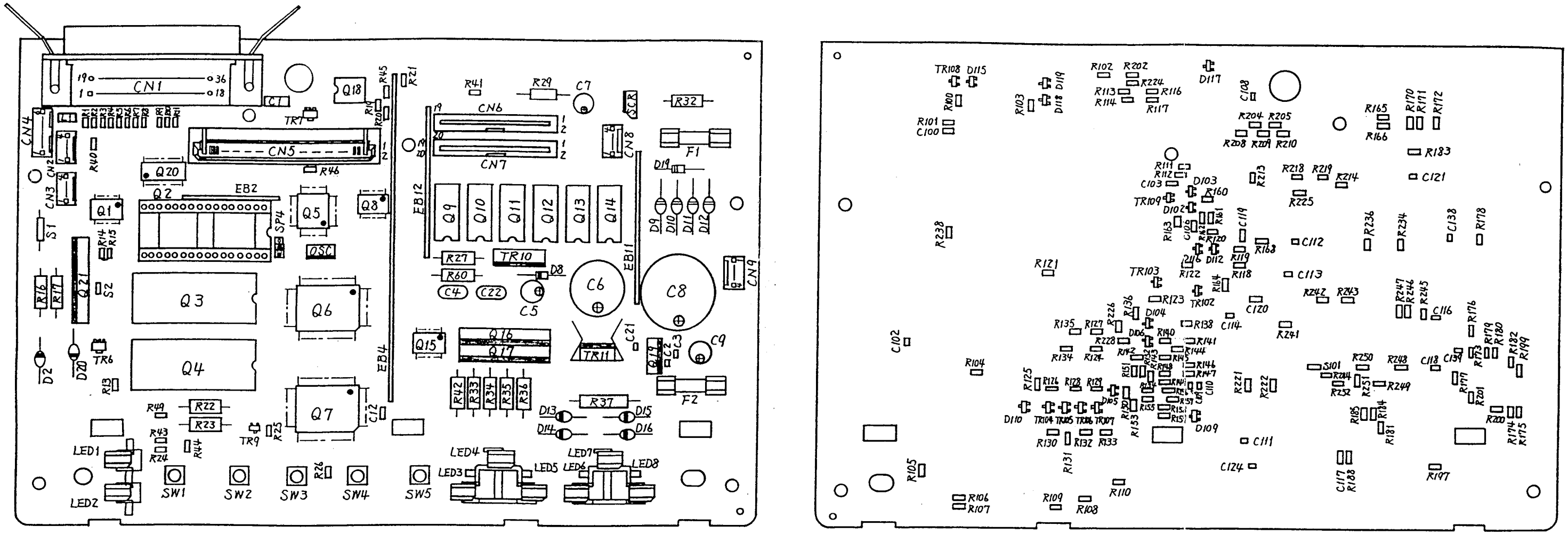
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC (SO)	720A0503N0007	2	
86	Q16,Q17	STA434A Transistor array	760A4726M0001	2	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	74LS06FP BIP digital IC (SO)	700A0503N0006	1	
89	Q20	74LS245FP BIP digital IC (SO)	700A0503N0245	1	
90	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
91	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
92	Q3	RP231026E-5102 MOS-MROM	817A0639M0002	1	
93	Q2	IC26-3206-GS4 IC socket (32 pin)	245A1016P0320	1	
94					
95					
96	TR103	2SB1197K-Q/R PNP-HF-TR (CP)	601A1035N0019	1	
97	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
98	TR5,TR6	2SB1123 PNP-LF-TR (CP)	601A1032N0002	2	
99	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
100	TR9,TR102, TR104-TR107	2SC3361/2SC2412K HPN-HF-TR (CP)	602A1003N0002	6	
101	TR1-TR4	2SD1472 NPN-LF-TR (CP)	603A1121N0007	4	
102	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (7/8)
PCB REV.1 VERSION 5

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
103	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
104					
105					
106					
107	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
108		DIC-S252 PC connector	224A3182P0021	1	
109	F1	SB2.5-125V2.5A Fuse	540A2046M1252	1	
110	F2	SB1.6-125V1.6A	540A2046M1162	1	
111	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
112	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
113	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
114	CN1	57RE-40360-730B-D29AA Square connector	220A1783P0361	1	
115	CN5	2PJ48D2S PC connector	224A1281P0483	1	
116	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
117	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
118	LED1-LED8	SLP-265B LED	650A0344M0003	8	
119	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
120		Heat sink	4PP4021-1015P001	1	
121	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
122	F1,F2	FP-213 Fuse holder	4LP-7142	4	
123					

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (8/8)
PCB REV.1 VERSION 5

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
124	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
125					
126	EB4	Power bar L=99.06 PNP-LF-TR	3LH-31313-19	1	
127					
128					
129					
130					
131	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
132					
133	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
134		LED stand (A)	3PP4043-3659P001	1	
135		LED stand (B)	3PP4043-3716P001	2	
136	Q2	Program ROM	4YR4077-1249G1	1	



Main Control PCB, UMMB-2
(4YA4042-1450G2) 1/2
Rev. No.1 (for OEL)
PCB version 6

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (1/8) for OEL
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D110,	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	4	
2	D118	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112,D119	MA152WA Signal DI (CP)	611A0029M0002	2	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD6.8M-B2 Zener DI (CP)	613A0233M0142B	1	
8	D117	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D8, D13-D16,D20	EM1Z/SM-1A-02/ DSA1A2/DSM1D2 Rectifier DI	610A0003M0001	7	
10					
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12					
13					
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17					
18	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
19	R144,R148, R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
20	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (2/8)
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
21	R118, R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	
22	R24,R40,R45, R105-R110, R136,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	11	
23	R116,R117, R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
24	R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	2	
25	R119	RM73B2B471J RN resistor (CP)	323A5015J0471	1	
26	R46,R163, R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
27	R204,R205, R208,R209, R210,R213, R214,R218, R219	RM73B2B681J RN resistor (CP)	323A5015J0681	9	
28	R14,R15,R21, R43,R121, R123-R129, R134,R135, R164,R174, R175,R184, R185,R188, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	22	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31					
32	R1-R11,R102, R112,R122, R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (3/8)
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
33	R25,R26,R114, R130-R133, R156,R157, R183,R221	RM73B2B562J RN resistor (CP)	323A5015J0562	11	
34	R13,R44,R49, R173, R176-R180, R182,R200, R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35	R226	RM73B2B753J RN resistor (CP)	323A5015J0753	1	
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154, R155,R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B623F RN resistor (CP)	323A5015F0623	1	
44					
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	2	
47	R141,R145	RM73B2B912F RN resistor (CP)	323A5015F0912	2	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (4/8)
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
50	R146	RM73B2B153F RN resistor (CP)	323A5015F0153	1	
51	R150,R153, R158,R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B563F RN resistor (CP)	323A5015F0563	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R138,R151, R152	RM73B2B302F RN resistor (CP)	323A5015F0302	3	
55					
56	R16,R17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	
59	R60	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	1	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R22,R23,R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	3	
62	R37	MOR2B39ΩJ RS resistor	321A1121J0390	1	
63	R32	MOR2B6.2KΩJ RS resistor	321A1431J0622	1	
64					
65					
66	C12,C100, C103,C106, C119,C120	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	
67	C102,C108, C111-C114, C116,C118, C121,C122, C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	11	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (5/8)
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
68	C139	CC2012SL1H151J 50V CC capacitor (CP)	303A3007K0151	1	
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008K3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	302A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	303A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-FO CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76					
77	C6	16VBSN-8200 (M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	
79	C22	C2FEC1H223K-FO 50V CQ-M capacitor 0.022μF	306A2026K1223	1	
80					
81	Q5	MSM83C154-551GS-V1K MOS-CPU (ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW/NMC9306N-NW MOS-EEPROM	816A8020M0001	1	
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC (SO)	720A0503N0007	2	
86	Q16	STA437A Transistor array	760A2726M0401	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (6/8)
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	SN7406NS BIP digital IC (SO)	700A0050N0006	1	
89	Q20	74LS245FP BIP digital IC (SO)	700A0503N0245	1	
90	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
91	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
92	Q3	RP231026E-5102 MOS-MROM	817A0639M0002	1	
93	Q2	IC26-3206-GS4 IC socket (32 pin)	245A1221P0320	1	
94	Q17	STA403A Transistor Array	760A0026M0402	1	
95	Q21	STA438A Transistor Array	760A0726M0401	1	
96	TR103	2SB1197K-Q/R PNP-HF-TR (CP)	601A1035N0019	1	
97	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
98	TR6	2SB1124 PNP-LF-TR (CP)	601A1032N0004	1	
99	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
100	TR9,TR102, TR104-TR107	2SC3361/2SC2412K HPN-HF-TR (CP)	602A1003N0002	6	
101					
102	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	
103	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
104					
105					

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (7/8)
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
106	S2,S101	MCR18-JPW Chip jumper (CP)	323A5011P0001	2	
107	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
108		DIC-S252 PC connector	224A3182P0021	1	
109	F1	GGS2-1/2 Fuse	540A2036M1252	1	
110	F2	GGS1-6/10 Fuse	540A2036M1162	1	
111	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
112	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
113	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
114	CN1	57RE-40360-730B-D29AA Square connector	220A1783P0361	1	
115	CN5	2PJ48D2S PC connector	224A1281P0483	1	
116	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
117	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
118	LED1-LED8	SLP-265B LED	650A0344M0003	8	
119	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
120		Heat sink	4PP4021-1015P001	1	
121	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
122	F1,F2	FP-213 Fuse holder	4LP-7142	4	
123					
124	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
125					

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (8/8)
PCB REV.1 VERSION 6

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
126	EB4	Power bar L=99.06	3LH-31313-19	1	
127					
128					
129					
130					
131	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
132					
133	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
134		LED stand (A)	3PP4043-3659P001	1	
135		LED stand (B)	3PP4043-3716P001	2	
136	Q2	Program ROM	4YR4077-1249G1	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (1/8) for OEL
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D110	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	4	
2	D118	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112,D119	MA152WA Signal DI (CP)	611A0029M0002	2	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD6.8M-B2 Zener DI (CP)	613A0233M0142B	1	
8	D117	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D8, D13-D16,D20	EM1Z/SM-1A-02/ DSA1A2/DSM1D2 Rectifier DI	610A0003M0001	7	
10					
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12					
13					
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17					
18	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
19	R144,R148, R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	
20	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (2/8)
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
21	R118, R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	
22	R24,R40,R45, R105-R110, R136,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	11	
23	R116,R117, R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
24	R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	2	
25	R119	RM73B2B471J RN resistor (CP)	323A5015J0471	1	
26	R46,R163, R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
27	R204,R205, R208,R209, R210,R213, R214,R218, R219	RM73B2B681J RN resistor (CP)	323A5015J0681	9	
28	R14,R15,R21, R43,R121, R123-R129, R134,R135, R164,R174, R175,R184, R185,R188, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	22	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31					
32	R1-R11,R102, R112,R122, R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (3/8)
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
33	R25,R26,R114, R130-R133, R156,R157, R183,R221	RM73B2B562J RN resistor (CP)	323A5015J0562	11	
34	R13,R44,R49, R173, R176-R180, R182,R200, R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35	R226	RM73B2B753J RN resistor (CP)	323A5015J0753	1	
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154, R155,R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B623F RN resistor (CP)	323A5015F0623	1	
44					
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	2	
47	R141,R145	RM73B2B912F RN resistor (CP)	323A5015F0912	2	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (4/8)
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B153F RN resistor (CP)	323A5015F0153	1	
51	R150,R153, R158,R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B563F RN resistor (CP)	323A5015F0563	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R138,R151, R152	RM73B2B302F RN resistor (CP)	323A5015F0302	3	
55					
56	R16,R17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	
59	R60	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	1	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R22,R23,R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	3	
62	R37	MOR2B39ΩJ RS resistor	321A1121J0390	1	
63	R32	MOR2B6.2KΩJ RS resistor	321A1431J0622	1	
64					
65					
66	C12,C100, C103,C106, C119,C120	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (5/8)
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
67	C102,C108, C111-C114, C116,C118, C121,C122, C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	11	
68	C139	CC2012SL1H102J 50V CC capacitor 1000PF	303A3007K0102	1	
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008K3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-FO CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76					
77	C6	16VBSN-8200 (M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	
79	C22	C2FEC1H223K-FO 50V CQ-M capacitor 0.022μF	306A2026K1223	1	
80					
81	Q5	MSM83C154-551GS-V1K MOS-CPU (ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15 MOS-S-RAM	804A2083F0001B	1	
83	Q18	ER59256-NW/NMC9306N-NW MOS-EEPROM	816A8020M0001	1	
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (6/8)
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC (SO)	720A0503N0007	2	
86	Q16	STA437A Transistor array	760A2726M0401	1	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	SN7406NS BIP digital IC (SO)	700A0050N0006	1	
89	Q20	74LS245FP BIP digital IC (SO)	700A0503N0245	1	
90	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
91	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
92	Q3	RP231026E-5102 MOS-MROM	817A0639M0002	1	
93	Q2	IC26-3206-GS4 IC socket (32 pin)	245A1221P0320	1	
94	Q17	STA403A Transistor Array	760A0026M0402	1	
95	Q21	STA438A Transistor Array	760A0726M0401	1	
96	TR103	2SB1197K-Q/R PNP-HF-TR (CP)	601A1035N0019	1	
97	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
98	TR6	2SB1124 PNP-LF-TR (CP)	601A1032N0004	1	
99	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
100	TR9,TR102, TR104-TR107	2SC3361/2SC2412K HPN-HF-TR (CP)	602A1003N0002	6	
101					
102	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (7/8)
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
103	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
104					
105					
106	S2,S101	MCR18-JPW Chip jumper (CP)	323A5011P0001	2	
107	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
108		DIC-S252 PC connector	224A3182P0021	1	
109	F1	GGS2-1/2 Fuse	540A2036M1252	1	
110	F2	GGS1-6/10 Fuse	540A2036M1162	1	
111	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
112	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
113	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
114	CN1	57RE-40360-730B-D29AA Square connector	220A1783P0361	1	
115	CN5	2PJ48D2S PC connector	224A1281P0483	1	
116	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
117	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
118	LED1-LED8	SLP-265B LED	650A0344M0003	8	
119	SW1-SW5	B3F-1000 Push-button switch	205A1179P1000	5	
120		Heat sink	4PP4021-1015P001	1	
121	L1	ZBF253D-01 Beads filter	377A1115P1309	1	
122	F1,F2	FP-213 Fuse holder	4LP-7142	4	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (8/8)
PCB REV.1 VERSION 7

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
123					
124	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
125					
126	EB4	Power bar L=99.06	3LH-31313-19	1	
127					
128					
129					
130					
131	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
132					
133	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
134		LED stand (A)	3PP4043-3659P001	1	
135		LED stand (B)	3PP4043-3716P001	2	
136	Q2	Program ROM	4YR4077-1249G1	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (1/8) for OEL
PCB REV.1 VERSION 8

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D102,D104, D109-D110	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	4	
2	D118	MA152WK Signal DI (CP)	611A0029M0003	1	
3	D112,D119	MA152WA Signal DI (CP)	611A0029M0002	2	
4	D115,D116	RD2.7M-B2 Zener DI (CP)	613A0233M0042B	2	
5	D103	RD4.7M-B3 Zener DI (CP)	613A0233M0102C	1	
6	D105	RD5.6M-B2 Zener DI (CP)	613A0233M0122B	1	
7	D106	RD6.8M-B2 Zener DI (CP)	613A0233M0142B	1	
8	D117	RD16M-B Zener DI (CP)	613A0233M0232	1	
9	D2,D8, D13-D16,D20	EM1Z/SM-1A-02/ DSA1A2/DSM1D2 Rectifier DI	610A0003M0001	7	
10					
11	D9-D12	DSA3A2 Rectifier DI	610A0021L0092A	4	
12					
13					
14	D19	RD10F-B Zener DI	613A2232L0182	1	
15	SCR	CR3CM-8 Gate thyristor	620A0022M0006E	1	
16					
17					
18	R104	RM73B2B180J RN resistor (CP)	323A5015J0180	1	
19	R144,R148, R149	RM73B2B680J RN resistor (CP)	323A5015J0680	3	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (2/8)
PCB REV.1 VERSION 8

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
20	R181	RM73B2B101J RN resistor (CP)	323A5015J0101	1	
21	R118, R245-R252	RM73B2B151J RN resistor (CP)	323A5015J0151	9	
22	R24,R40,R45, R105-R110, R136,R197	RM73B2B221J RN resistor (CP)	323A5015J0221	11	
23	R116,R117, R234	RM73B2B561J RN resistor (CP)	323A5015J0561	3	
24	R100,R236	RM73B2B431J RN resistor (CP)	323A5015J0431	2	
25	R119	RM73B2B471J RN resistor (CP)	323A5015J0471	1	
26	R46,R163, R225, R241-R244	RM73B2B511J RN resistor (CP)	323A5015J0511	7	
27	R204,R205, R208,R209, R210,R213, R214,R218, R219	RM73B2B681J RN resistor (CP)	323A5015J0681	9	
28	R14,R15,R21, R43,R121, R123-R129, R134,R135, R164,R174, R175,R184, R185,R188, R199,R238	RM73B2B102J RN resistor (CP)	323A5015J0102	22	
29	R101,R202	RM73B2B122J RN resistor (CP)	323A5015J0122	2	
30	R161	RM73B2B182J RN resistor (CP)	323A5015J0182	1	
31					
32	R1-R11,R102, R112,R122, R165,R166, R170-R172	RM73B2B332J RN resistor (CP)	323A5015J0332	19	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (3/8)
PCB REV.1 VERSION 8

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
33	R25,R26,R114, R130-R133, R156,R157, R183,R221	RM73B2B562J RN resistor (CP)	323A5015J0562	11	
34	R13,R44,R49, R173, R176-R180, R182,R200, R201	RM73B2B103J RN resistor (CP)	323A5015J0103	12	
35	R226	RM73B2B753J RN resistor (CP)	323A5015J0753	1	
36	R120	RM73B2B303J RN resistor (CP)	323A5015J0303	1	
37	R111	RM73B2B683J RN resistor (CP)	323A5015J0683	1	
38	R162	RM73B2B124J RN resistor (CP)	323A5015J0124	1	
39	R168	RM73B2B154J RN resistor (CP)	323A5015J0154	1	
40	R113,R154, R155,R228	RM73B2B394J RN resistor (CP)	323A5015J0394	4	
41	R103	RM73B2B754J RN resistor (CP)	323A5015J0754	1	
42	R20	RM73B2B182F RN resistor (CP)	323A5015F0182	1	
43	R147	RM73B2B623F RN resistor (CP)	323A5015F0623	1	
44					
45	R19	RM73B2B432F RN resistor (CP)	323A5015F0432	1	
46	R160,R224	RM73B2B682F RN resistor (CP)	323A5015F0682	2	
47	R141,R145	RM73B2B912F RN resistor (CP)	323A5015F0912	2	
48	R41	RM73B2B243F RN resistor (CP)	323A5015F0243	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (4/8)
PCB REV.1 VERSION 8

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
49	R222	RM73B2B133F RN resistor (CP)	323A5015F0133	1	
50	R146	RM73B2B153F RN resistor (CP)	323A5015F0153	1	
51	R150,R153, R158,R159	RM73B2B622F RN resistor (CP)	323A5015F0622	4	
52	R140	RM73B2B563F RN resistor (CP)	323A5015F0563	1	
53	R142,R143	RM73B2B124F RN resistor (CP)	323A5015F0124	2	
54	R138,R151, R152	RM73B2B302F RN resistor (CP)	323A5015F0302	3	
55					
56	R16,R17	RD1/2Y180ΩJ RD resistor	321A1431J0181	2	
57	R27	RD1/2Y1.2KΩJ RD resistor	321A1431J0122	1	
58	R33-R36	RD1/2Y1.5KΩJ RD resistor	321A1431J0152	4	
59	R60	RD1/2Y2.2KΩJ RD resistor	321A1431J0222	1	
60	R29	RD1/2Y2.4KΩJ RD resistor	321A1431J0242	1	
61	R22,R23,R42	RD1/2Y3.3KΩJ RD resistor	321A1431J0332	3	
62	R37	MOR2B39ΩJ RS resistor	321A1121J0390	1	
63	R32	MOR2B6.2KΩJ RS resistor	321A1431J0622	1	
64					
65					
66	C12,C100, C103,C106, C119,C120	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	6	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (5/8)
PCB REV.1 VERSION 8

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
67	C102,C108, C111-C114, C116,C118, C121,C122, C124	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	11	
68	C139	CC2012SL1H102J 50V CC capacitor (CP)	303A3007K0102	1	
69	C2,C3	CK2012B1H103K 50V CK capacitor (CP)	303A6008K3103	2	
70	C21,C138	CC2012SL1H221J 50V CC capacitor (CP)	303A3007K0221	2	
71	C117	CC3216SL1H561J 50V CC capacitor (CP)	303A3008K0561	1	
72	C1	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
73	C5,C9	CEUSM1A101 10V CE capacitor 100μF	304A1041A1101	2	
74	C4	CQMF92PP2A223G-FO CQ capacitor 0.022μF	306A4103G2223	1	
75	C7	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
76					
77	C6	16VBSN-8200 (M) 16V CE capacitor 8200μF	304A1037C9822	1	
78	C8	SME50VBSN4700-22D CE capacitor 4700μF	304A1152H1472	1	
79	C22	C2FEC1H223K-FO 50V CQ-M capacitor 0.022μF	306A2026K1223	1	
80	C30	CK92F1E105ZS 25V CK capacitor 1.0μF	303A4117Z2105	1	
81	Q5	MSM83C154-551GS-V1K MOS-CPU (ROM) (FP)	853A0137N0551	1	
82	Q4	HM65256BP-15/LC33832P MOS-S-RAM	804A2083F0001B	1	CN-104
83	Q18	BR93CS46-NW MOS-EEPROM	816A0326M0000	1	Compat-ible to ER59256 -NW

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (6/8)
PCB REV.1 VERSION 8

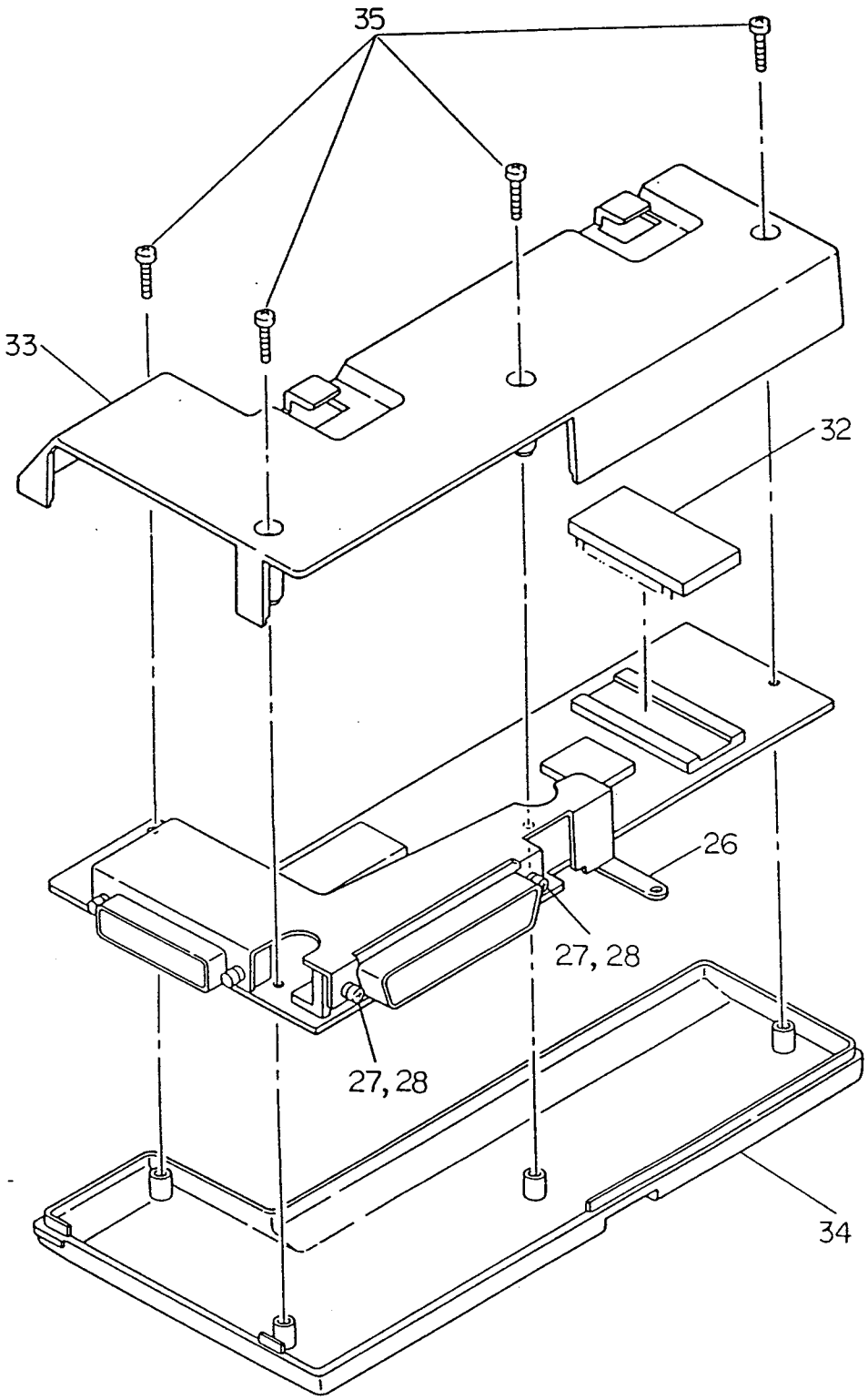
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
84	Q9-Q14	LB1205 Transistor array	760A4731M0401	6	
85	Q8,Q15	NJM2901M/UPC339G2 BIP linear IC (SO)	720A0503N0007	2	
86	Q16	STA437A Transistor array	760A2726M0401	1	
87	Q19	LA5005 BIP linear IC	720A1033M0001	1	
88	Q1	SN7406NS BIP digital IC (SO)	700A0050N0006	1	
89	Q20	74LS245FP BIP digital IC (SO)	700A0503N0245	1	
90	Q7	LC92018B-283 MOS digital IC (FP)	702A4931N0001	1	
91	Q6	LC92011B-358 MOS digital IC (FP)	702A4931N0002	1	
92	Q3	RP231027E-5102 MOS-MROM	817A0639M0002	1	
93	Q2	IC26-3206-GS4 IC socket (32 pin)	245A1221P0320	1	
94	Q17	STA403A Transistor Array	760A0026M0402	1	
95	Q21	STA438A Transistor Array	760A0726M0401	1	
96	TR103	2SB1197K-Q/R PNP-HF-TR (CP)	601A1035N0019	1	
97	TR108,TR109	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
98	TR6	2SB1124 PNP-LF-TR (CP)	601A1032N0004	1	
99	TR7	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	1	
100	TR9,TR102, TR104-TR107	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	
101					

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (7/8)
PCB REV.1 VERSION 8

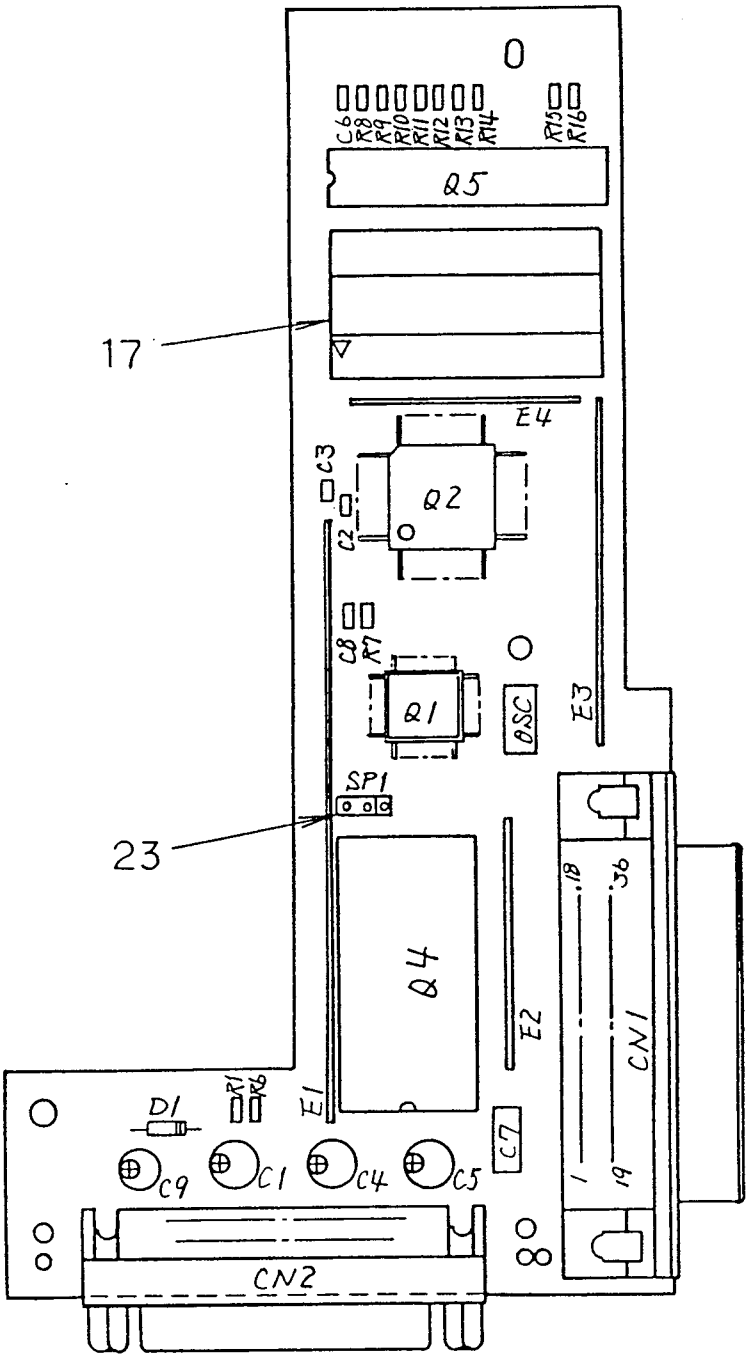
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
102	TR10	2SB883 PNP-LF-TR	601A1232M0001	1	
103	TR11	2SB1274 PNP-LF-TR	601A1232M0004	1	
104					
105					
106	S2,S101	MCR18-JPW Chip jumper	323A5011P0001	2	
107	SP4	FFC-3AMEP2 FC connector	225A3115P0030	1	
108		DIC-S252 PC connector	224A3182P0021	1	
109	F1	GGS2-1/2 Fuse	540A2036M1252	1	
110	F2	GGS1-6/10 Fuse	540A2036M1162	1	
111	CN4	00-8263-0612-00-000 PC connector	224A3357P0060	1	
112	CN3,CN8,CN9	00-8263-0412-00-000 PC connector	224A3357P0040	3	
113	CN2	00-8263-0412-00-003 PC connector	224A3357P0041	1	
114	CN1	57RE-40360-730B-D29AA Square connector	220A1783P0361	1	
115	CN5	2PJ48D2S PC connector	224A1281P0483	1	
116	CN6,CN7	PFC-20C PC connector	224A3883P0200	2	
117	OSC	FAR-C4SB13500000M02A Piezoelectric vibrator	381A2001B0006	1	
118	LED1-LED8	SLP-265B LED	650A0344M0003	8	
119	SW1-SW5	SOA-113HS Push-button switch	205A1162P1001	5	
120		Heat sink	4PP4021-1015P001	1	
121	L1	ZBF253D-01 Beads filter	377A1115P1309	1	

Main Control PCB, UMMB-2 (4YA4042-1450G2) 2/2 (8/8)
PCB REV.1 VERSION 8

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
122	F1,F2	FP-213 Fuse holder	4LP-7142	4	
123					
124	EB2	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
125					
126	EB4	Power bar L=99.06	3LH-31313-19	1	
127					
128					
129					
130					
131	EB11	Power bar L=45.72 P=45.72 N=2	3LH-31313-85	1	
132					
133	EB12	Power bar L=45.72 P=22.86 N=3	3LH-31313-16	1	
134		LED stand (A)	3PP4043-3659P001	1	
135		LED stand (B)	3PP4043-3716P001	2	
136	Q2	Program ROM	4YR4077-1249G1	1	



RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G1) 1/2(1/2)
for ODA Rev. No.1, PCB version 4 (1st Lot~)



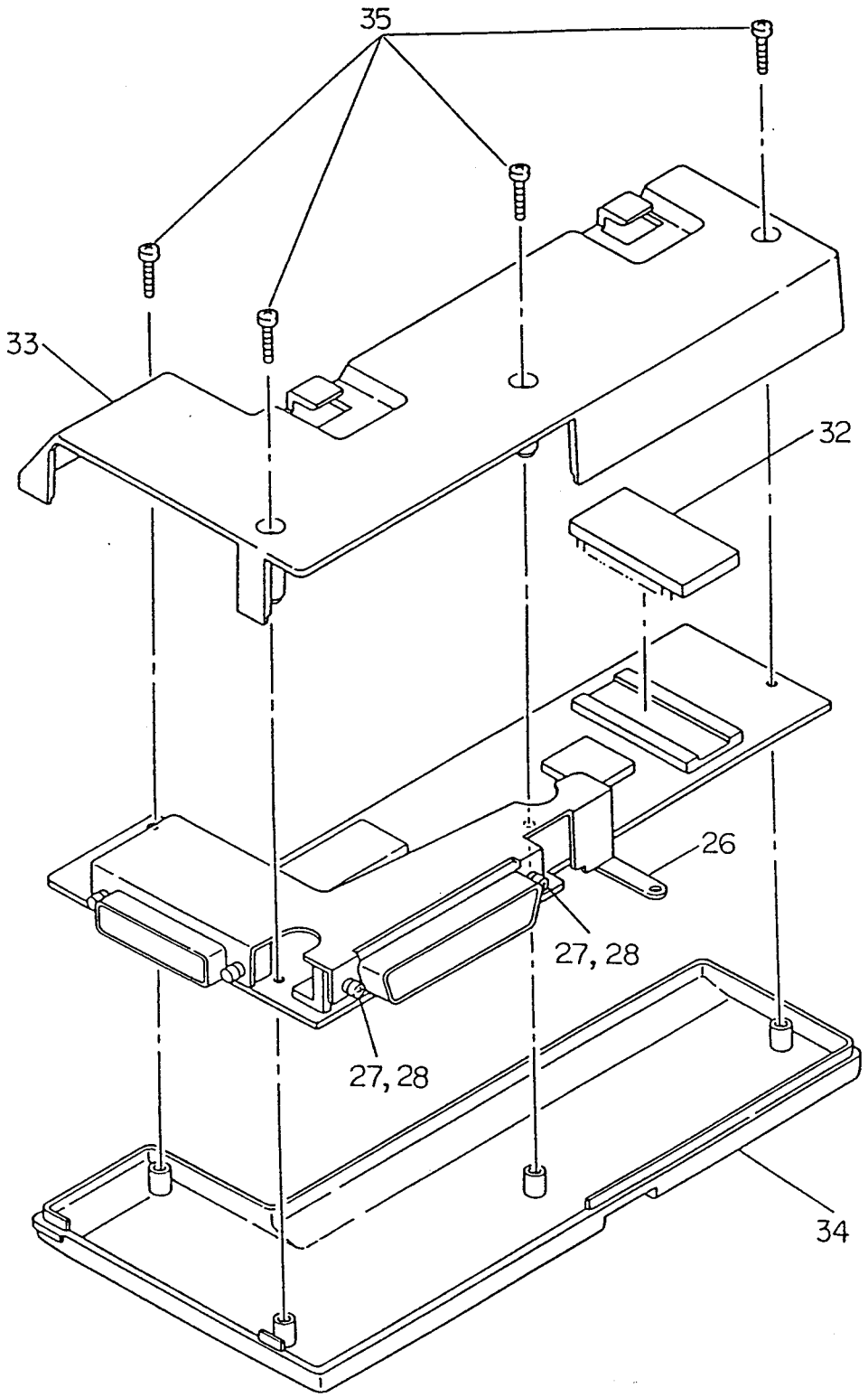
RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G1) 1/2(2/2)
for ODA Rev. No.1, PCB version 4 (1st Lot~)

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G1) 2/2 (1/2)
for ODA Rev. No.1, PCB version 4 (1st Lot~)

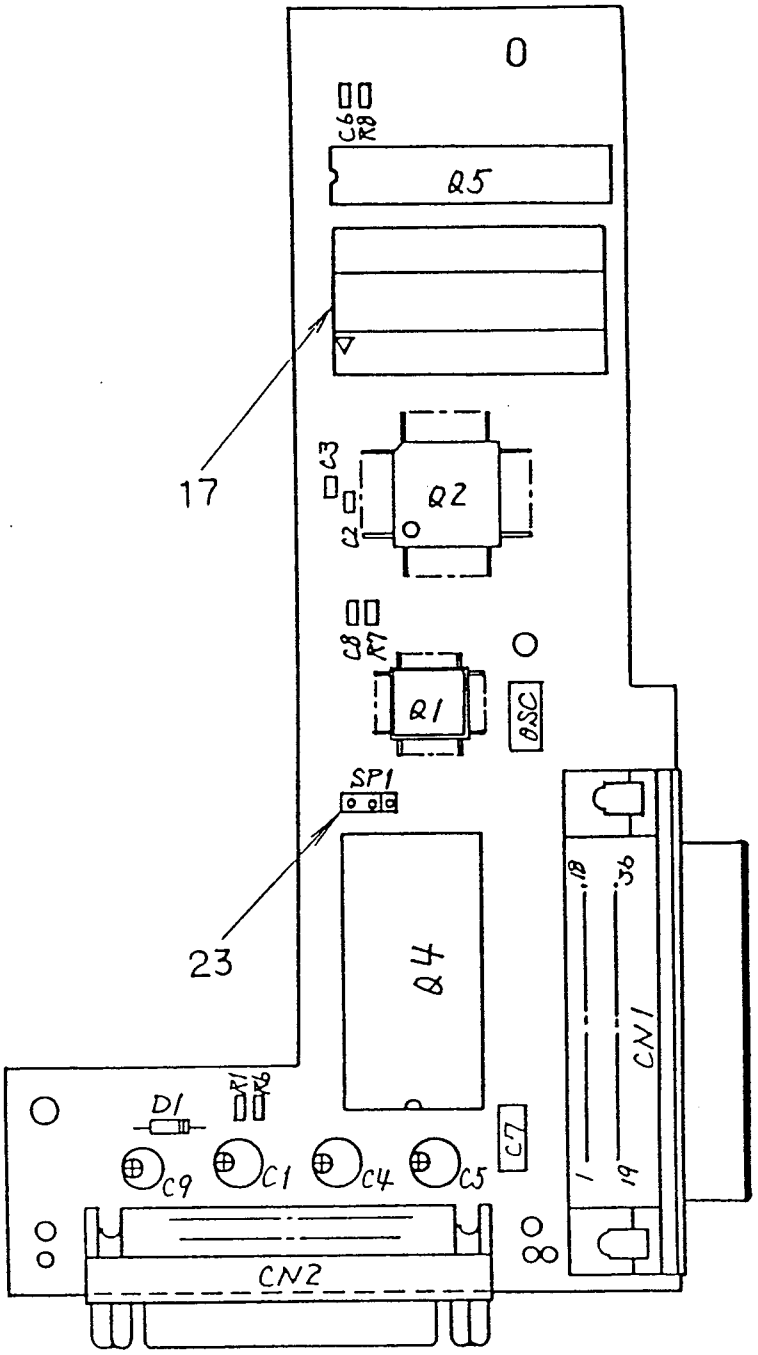
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D1	1S953/1S2075K/1S2473 Signal DI	611A0003L0001	1	
2					
3	R6	RM73B2B102J RN resistor (CP)	323A5015J0102	1	
4	R7-R16	RM73B2B103J RN resistor (CP)	323A5015J0103	10	
5	R1	RM73B2B514J RN resistor (CP)	323A5015J0514	1	
6					
7	C2,C3,C6,C8	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	4	
8	C7	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
9	C4,C5	CEUSM1E470 25V CE capacitor 47μF	304A1041E1470	2	
10	C9	16MS5-47M 16V CE capacitor 47μF	304A1046C1470	1	
11	C1	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
12					
13	Q1	MSM80C31FVGS-V1K MOS-CPU (FP)	851A0124N0012	1	
14	Q2	LC9103B-293 MOS digital IC (FP)	702A4931N0003	1	
15	Q5	HM6264ALSP-15 MOS-S-RAM	804A0021M6335	1	
16	Q4	HY0232 HYB module IC	774A4012M0001	1	
17		DL2-28A-05 IC socket	245A1155P0280	1	
18					
19					
20					
21	OSC	FAR-C45SB11059000-M02 Vibrator	4LP-12186-1	1	
22	SP1	FFC-3AMEP2 FC connector	225A3115P0030	1	
23	SP1	DIC-S252 PC connector	224A3182P0021	1	

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G1) 2/2 (2/2)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
24	CN1	57LE-10360-7300(D53) Square connector	220A1784P0360	1	
25	CN2	DBLC-J25SAF-20L9 Square connector	220A1373P0254	1	
26		Serial I/F FG plate	3PP4043-3787P001	1	
27		Screw (pan head screw with washer)	+P(SW+2W)3-8-HHC	2	
28		Nut	2N3-HH	1	
29	E1	Power bar L=76.2 P=15.24 N=6	3LH-31313-14	2	
30	E2,E4	Power bar L=30.48 P=15.24 N=3	3LH-31313-10	1	
31	E3	Power bar L=45.72 P=15.24 N=4	3LH-31313-5	1	
32		ROM IC	4YR4064-1562G1	1	
33		Cover (U)	2PP4043-3718P1	1	
34		Cover (L)	2PP4043-3717P1	1	
35		Tapping screw	+T_2P_2-8-HHC-V	4	



RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G1) 1/2(1/2)
for ODA Rev. No.1, PCB version 4 (2nd Lot~)



Note: No change in performance for the 1st lot.

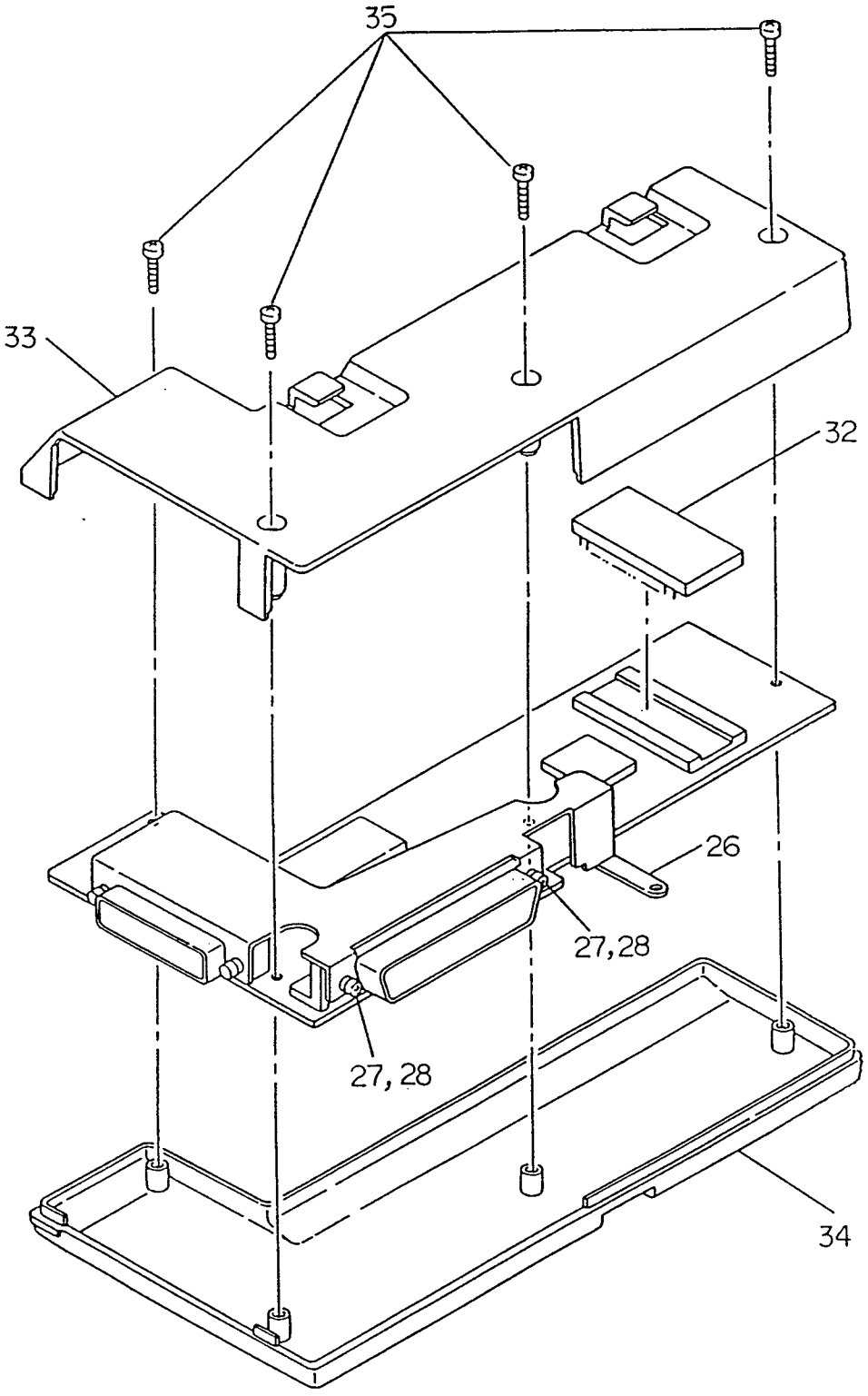
RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G1) 1/2(2/2)
for ODA Rev. No.1, PCB version 4 (2nd Lot~)

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G2) 2/2 (1/2)
for ODA Rev. No.1 PCB version 4 (2nd Lot~)

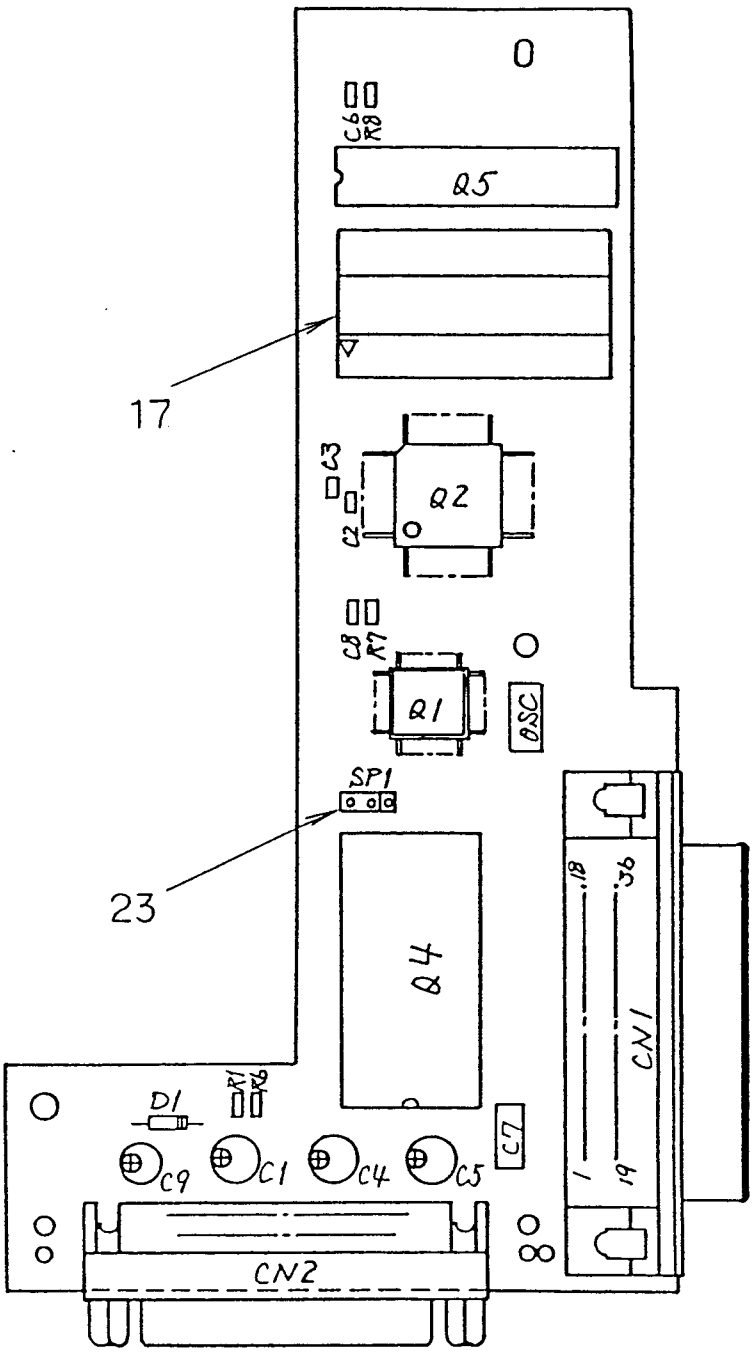
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D1	1S953/1S2075K/1S2473 Signal DI	611A0003L0001	1	
2					
3	R6	RM73B2B102J RN resistor (CP)	323A5015J0102	1	
4	R7,R8	RM73B2B103J RN resistor (CP)	323A5015J0103	2	
5	R1	RM73B2B514J RN resistor (CP)	323A5015J0514	1	
6					
7	C2,C3,C6,C8	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	4	
8	C7	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
9	C4,C5	CEUSM1E470 25V CE capacitor 47μF	304A1041E1470	2	
10	C9	16MS5-47M 16V CE capacitor 47μF	304A1046C1470	1	
11	C1	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
12					
13	Q1	MSM80C31FVGS-V1K MOS-CPU (FP)	851A0124N0012	1	
14	Q2	LC9103B-293 MOS digital IC (FP)	702A4931N0003	1	
15	Q5	HM6264ALSP-15 MOS-S-RAM	804A0021M6335	1	
16	Q4	HY0232 HYB module IC	774A4012M0001	1	
17		DICF-28CS-E IC socket	245A1221P0280	1	
18					
19					
20					
21	OSC	FAR-C4SB11059000-M02 Vibrator	4LP-12186-1	1	
22	SP1	FFC-3AMEP2 FC connector	225A3115P0030	1	
23	SP1	DIC-S252 PC connector	224A3182P0021	1	

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G2) 2/2 (2/2)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
24	CN1	57LE-10360-7300(D53) Square connector	220A1784P0360	1	
25	CN2	DBLC-J25SAF-20L9 Square connector	220A1373P0254	1	
26		Serial I/F FG plate	3PP4043-3787P001	1	
27		Screw (pan head screw with washer)	+P(SW+2W)3-8-HHC	2	
28		Nut	2N3-HH	2	
29					
30					
31					
32		ROM IC	4YR4064-1562G1	1	
33		Cover (U)	2PP4043-3718P1	1	
34		Cover (L)	2PP4043-3717P1	1	
35		Tapping screw	+T_2P_2-8-HHC-V	4	



RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G2) 1/2(1/2)
for OEL



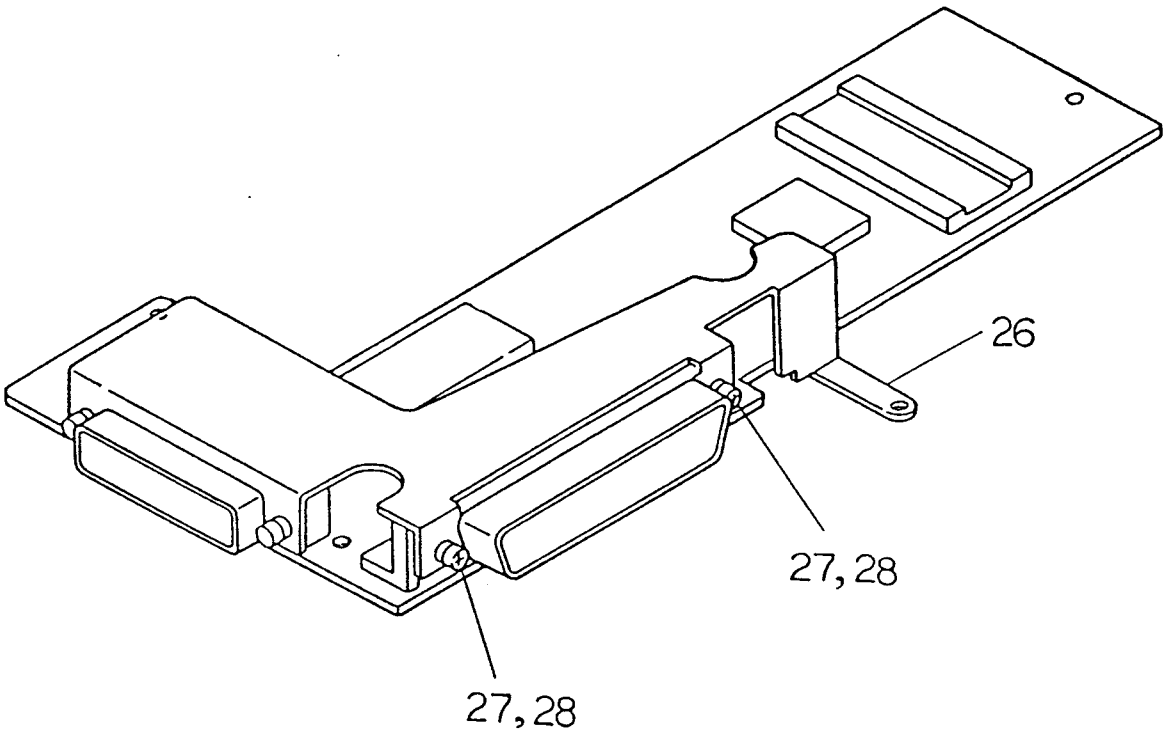
RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G2) 1/2 (2/2)
for OEL

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G2) 2/2 (1/2)
for OEL

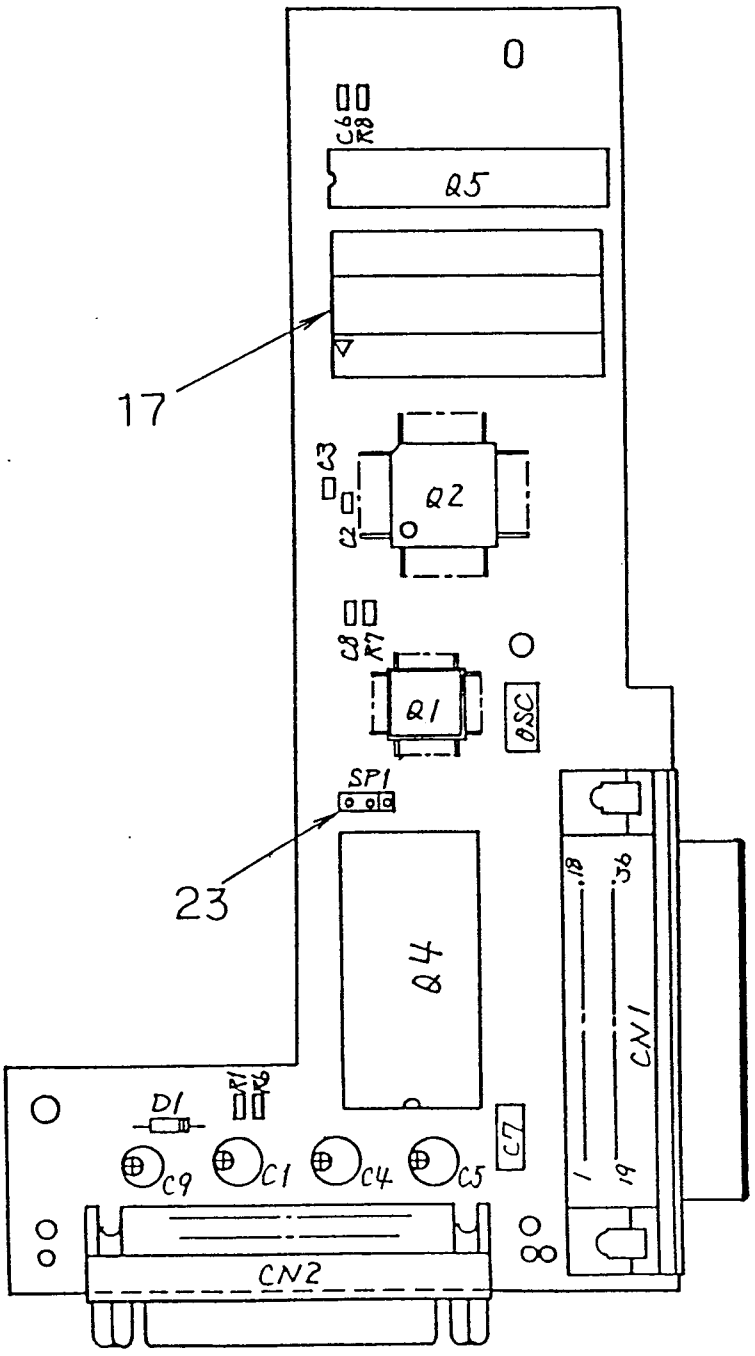
No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D1	1S953/1S2075K/1S2473 Signal DI	611A0003L0001	1	
2					
3	R6	RM73B2B102J RN resistor (CP)	323A5015J0102	1	
4	R7,R8	RM73B2B103J RN resistor (CP)	323A5015J0103	2	
5	R1	RM73B2B514J RN resistor (CP)	323A5015J0514	1	
6					
7	C2,C3,C6,C8	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	4	
8	C7	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
9	C4,C5	CEUSM1E470 25V CE capacitor 47μF	304A1041E1470	2	
10	C9	16MS5-47M 16V CE capacitor 47μF	304A1046C1470	1	
11	C1	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
12					
13	Q1	MSM80C31FVGS-V1K MOS-CPU (FP)	851A0124N0012	1	
14	Q2	LC9103B-293 MOS digital IC (FP)	702A4931N0003	1	
15	Q5	HM6264ALSP-15 MOS-S-RAM	804A0021M6335	1	
16	Q4	HY0232 HYB module IC	774A4012M0001	1	
17		DICF-28CS-E IC socket	245A1221P0280	1	
18					
19					
20					
21	OSC	FAR-C4SB11059000-M02 Vibrator	4LP-12186-1	1	
22	SP1	FFC-3AMEP2 FC connector	225A3115P0030	1	
23	SP1	DIC-S252 PC connector	224A3182P0021	1	

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G2) 2/2 (2/2)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
24	CN1	57LE-10360-7300(D53) Square connector	220A1784P0360	1	
25	CN2	DBLC-J25SAF-20L9 Square connector	220A1373P0254	1	
26		Serial I/F FG plate	3PP4043-3787P001	1	
27		Screw (pan head screw with washer)	+P(SW+2W)3-8-HHC	2	
28		Nut	2N3-HH	2	
29					
30					
31					
32		ROM IC	4YR4064-1562G1	1	
33		Cover (U)	2PP4043-3718P1	1	
34		Cover (L)	2PP4043-3717P1	1	
35		Tapping screw	+T_2P_2-8-HHC-V	4	



RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G11) 1/2(1/2)
for ODA, OEL maintenance (REV. No.1, PCB Version 4)



RS-232C Serial Interface Module UMRS-PCB (4YA4042-1451G11) 1/2(2/2)
for ODA, OEL maintenance (REV. No.1, PCB Version 4)

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G11) 2/2 (1/2)
for ODA, OEL maintenance (REV. No.1, PCB Version 4)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
1	D1	1S953/1S2075K/1S2473 Signal DI	611A0003L0001	1	
2					
3	R6	RM73B2B102J RN resistor (CP)	323A5015J0102	1	
4	R7,R8	RM73B2B103J RN resistor (CP)	323A5015J0103	2	
5	R1	RM73B2B514J RN resistor (CP)	323A5015J0514	1	
6					
7	C2,C3,C6,C8	CK3216F1H104Z 50V CK capacitor (CP)	303A6009Z3104	4	
8	C7	TCK45F2E103ZYA 250V CK capacitor 10000PF	302A4027Z5103	1	
9	C4,C5	CEUSM1E470 25V CE capacitor 47μF	304A1041E1470	2	
10	C9	16MS5-47M 16V CE capacitor 47μF	304A1046C1470	1	
11	C1	CEUSM2A010 100V CE capacitor 1.0μF	304A1041A2109	1	
12					
13	Q1	MSM80C31FVGS-V1K MOS-CPU (FP)	851A0124N0012	1	
14	Q2	LC9103B-293 MOS digital IC (FP)	702A4931N0003	1	
15	Q5	HM6264ALSP-15 MOS-S-RAM	804A0021M6335	1	
16	Q4	HY0232 HYB module IC	774A4012M0001	1	
17		DICF-28CS-E IC socket	245A1221P0280	1	
18					
19					
20					
21	OSC	FAR-C4SB11059000-M02 Vibrator	4LP-12186-1	1	
22	SP1	FFC-3AMEP2 FC connector	225A3115P0030	1	
23	SP1	DIC-S252 PC connector	224A3182P0021	1	

RS-232C Serial Interface Module, UMRS-PCB (4YA4042-1451G11) 2/2 (2/2)

No.	Symbol	Type/Name	Part No.	Q'ty	Remarks
24	CN1	57LE-10360-7300(D53) Square connector	220A1784P0360	1	
25	CN2	DBLC-J25SAF-20L9 Square connector	220A1373P0254	1	
26		Serial I/F FG plate	3PP4043-3787P001	1	
27		Screw (pan head screw with washer)	+P(SW+2W)3-8-HHC	2	
28		Nut	2N3-HH	2	
29					
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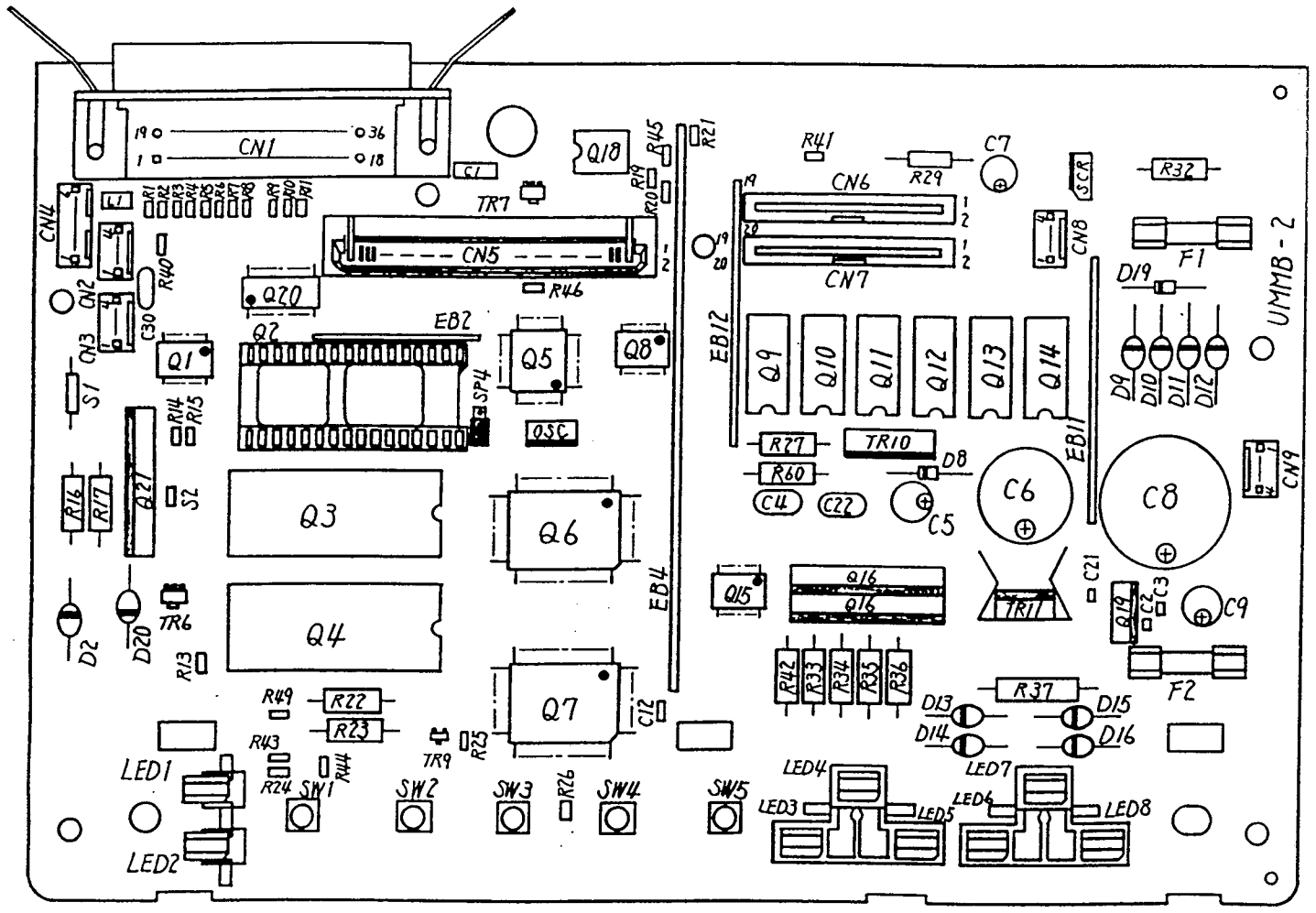
35					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